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ABSTRACT

This unit, one of six which comprise the Fair Play program, is designed to increase physical fitness and to improve self-concept and decision-making skills in relation to physical activity. The Fair Play program is a series of student and teacher materials the purpose of which is to help students expand their female or male self-concepts, increase their decision-making skills, and improve their academic achievement by changing their stereotypic attitudes toward particular content areas. This teaching guide includes a brief description of the total program, an overview of the content of this unit, recommendations for instructional approaches, descriptions of program materials, and a bibliography of print and audiovisual resources. The bulk of the guide consists of 29 lessons organized into three parts: (1) introduction to male and female differences in attitudes toward physical activity and development of positive attitudes in this area; (2) activities to enhance abilities and attitudes in six areas of physical fitness; and (3) post tests and personal decision making related to future physical activity. The final section provides a unit performance test with answer key. (DC)

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Fair Play: Developing Self-Concept
and Decision-Making Skills
in the Middle School

Decisions about Physical Activity

Teacher's Guide

Byron G. Massialas
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Florida State University

Women's Educational Equity Act Program
U.S. Department of Education
T. H. Bell, Secretary

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Preface

Cultural beliefs and attitudes about what it means to be female or male influence all of us. Recently, beliefs about what females can and should do have been changing. Beliefs about male roles are changing too. Students need an opportunity to examine themselves in a new light—and make decisions about their lives.

This program, Fair Play: Developing Self-Concept and Decision-Making Skills in the Middle School, has two main purposes: to expand each student's female or male self-concept, and to increase each student's decision-making capabilities. Because of the recent emphasis on teaching basic skills in the schools, a third focus of the program is to improve students' academic abilities and skills. Specifically, the program goals are as follows:

- To help students expand their self-concept in relation to their female or male identity, including their role behavior, personality traits, and occupational aspirations and expectations
- To increase students' self-confidence and participation in making decisions
- To increase students' academic achievement by helping students change stereotypic attitudes toward particular content areas and alerting them to the relationship between subject matter and occupational opportunity

Program units are a series of five student texts and six teacher's guides designed to supplement components of the present curriculum. In each of these units, students have the opportunity to discover information that can enable them to expand their female or male self-concepts. Students are encouraged to examine stereotypes about what girls or boys "are like" and what girls or boys "should do." Students then have the opportunity to make personal and group decisions based on the knowledge they have gained.

The units, which focus on specific skills, are as follows:

- Decisions and You—a 12-lesson prerequisite decision-making unit in which students learn personal and group decision-making skills (student text and teacher's guide)
- Decisions about Roles—a 20-lesson social studies unit in which students find out how roles change over time and how people can choose and define their roles (student text and teacher's guide)
- Decisions about Language—a 20-lesson language arts unit in which students compare and analyze female and male language (student text and teacher's guide)
- Decisions about Mathematics—an 18-lesson math unit in which students learn how to collect and interpret quantitative data while examining economic and career-related issues about females and males (student text and teacher's guide)
- Decisions about Science—a 17-lesson science unit in which students examine female and male characteristics and behaviors in relation to genetics and environment (student text and teacher's guide)
- Decisions about Physical Activity—a 29-lesson physical education unit in which students participate in a physical fitness program designed to improve students' fitness skills and attitudes toward physical activity (teacher's guide)

The teacher's guide for each unit contains not only the student materials but also detailed annotations to aid the teacher in planning and presenting each lesson.

Introduction

This unit on physical fitness for middle school students has three major goals:

1. To improve self-concept—to improve and expand students' male and female self-concepts in relation to physical activity, and thus increase both female and male participation in physical activity throughout life

2. To improve fitness—to increase both girls' and boys' knowledge and skills in six basic fitness areas (cardiovascular endurance, muscular endurance, muscular strength, flexibility, agility, and static balance), and thus provide a basis for more skillful participation in physical activity now and in the future

3. To improve decision-making skills—to give students an opportunity to make decisions regarding participation in physical activity, based on information and skills gained through the unit

The unit has three parts. Part I, Attitudes toward Physical Activity, is designed to alert students to female and male differences in attitudes toward various physical activities, as well as to pretest students in the six physical fitness areas covered in this unit. Part I also presents information about the physiological, psychological, and sociological benefits of physical activity, in order to help both girls and boys develop positive attitudes toward physical activity.

Part II, Building Fitness, contains a suggested sequence of activities designed to enhance students' physical abilities in, as well as attitudes toward, six areas of fitness: cardiovascular endurance, muscular endurance, muscular strength, agility, flexibility,

and static balance. In these activities, students are encouraged to think in terms of increasing individual potential rather than accepting stereotypes about females or males.

In Part III, Measuring Change, students are encouraged to think about the information and activities in Parts I and II and to make decisions about physical activity for their immediate and long-term future.

Teaching the Unit

This unit is designed to orient students to the areas of fitness and to improve their female or male self-concept in relation to physical activity. Parts I and II of the unit (Lessons 1-23) should therefore be taught in the fall, at the beginning of the school year.

The unit includes both pretests and posttests in each area of fitness, as well as pretest and posttest activities for assessing students' attitudes. All pretests should be administered at the beginning of the unit, while posttests (Lessons 24-29) should be administered at the end of the unit. The results of pretesting should be used to design the curriculum during the year to meet student needs as identified by the pretests. Posttesting can be used to evaluate the curriculum that is chosen.

The unit presents a fun, innovative way for students to exercise and requires very little equipment.

Part I is a two-week series of pretests and activities. Students spend five days doing affective/cognitive activities and five days taking pretests for each area of fitness. Pretest days are alternated with activity days.

Part II is a three-week series of activities designed (a) to provide students with an opportunity to set goals in the six areas of fitness and (b) to enhance students' development in these areas.

Part III, consisting of posttesting and decision making, requires from one to two weeks and should be done at the end of the school year.

The crucial points to emphasize to students throughout the unit (and the year as well) are the following:

- Because of individual differences, a person should concentrate on fulfilling individual physical potential, rather than on trying to match someone else's performance.
- Both females and males have biological assets. There is nothing inherently superior or inferior about the structure or function of either sex.
- Individual aptitude can be assessed more accurately according to body type (ectomorph, mesomorph, and endomorph) than according to sex.
- Differences (both individual and group) between females and males are often not as great as differences between individuals of the same sex.
- One of the greatest areas of difference between the sexes is in opportunity and experience. As more women have begun to participate in competitive sports and other physical activities, society's stereotyped beliefs about differences in female and male physical potential have begun to change.
- The benefits of physical activity are the same for females and males.
- Every individual can benefit from a program of physical activity. Rewards are not only physiological, but psychological as well.

Each of the preceding points is presented in more detail in specific lessons. As you work with students, remind them periodically of the following reasons for attaining physical fitness:*

Occupational reasons. Physical fitness helps people achieve their day's work with better productivity. Also, certain jobs require various physical abilities and skills.

Prevention of disease. Physical fitness helps individuals develop reserve energy to combat stress or an invading organism.

Enjoyment of recreational pursuits. Physical fitness enables individuals to engage in various recreational pursuits. The rewards of such activity are reduction of stress and increased relaxation, as well as maintenance of physical fitness.

Participation in sports: Physical, psychological, and social benefits. A high level of physical fitness is usually required for participation in sports, especially at highly competitive levels. The rewards of sports (and games) are profound in their portrayal of life: goals are set and people join together to achieve them; rules must be understood and respected; skills such as leadership and compromise are developed; people learn that success is possible and that failure can be overcome. Students should be encouraged to participate in sports in order to develop skills, work patterns, and attitudes that are considered desirable, even salable, in our society.

Feeling good. Scientific evidence shows a positive relationship between epinephrine (a hormone released by the body during exercise) and the feeling of happiness. Epinephrine stimulates metabolism, increases blood flow, and dilates the bronchioles.

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*James W. Terry, Dewayne J. Johnson, Charles R. Erickson, and Candis Pendergast, *Physical Activity for All Ages* (Dubuque, Iowa: Kendall/Hunt Publishing Company, 1979), pp. 14-15.

Make sure that students understand the difference between athletics and physical education. Athletics is for individuals who are talented in some form(s) of sports or physical activity, whereas physical education is for everyone.

As you guide students through the unit, remember that the physical educator serves as the catalyst for changing student behavior. The most important way to help students improve their self-concept and level of participation is to praise each student's efforts toward individual goals. By the time students finish this unit, they should feel that expanding individual potential is rewarding.

The Implementation Handbook is designed to assist the school—its faculty, students, and administrators, as well as students' parents—in carrying out the basic goals of the Fair Play program.

For your convenience, the handbook is designed as a reference. Sections addressed to both teachers and administrators involved in the program include Program Goals, Description of Units, and Program Evaluation. A section entitled Administering the Program specifically addresses administrative concerns, while the section Teaching the Program contains material particularly useful for teachers.

You will probably make the most use of the handbook while you are planning implementation of the program. But keep it handy throughout, for use in clarifying particular aspects of the program.

EQUIPMENT

The following equipment is necessary to implement the unit:

- pencils and paper for students
- a track or measured distance
- a horizontal bar or pipe
- five 2 x 2-inch sticks, 1 foot long
- two stopwatches
- a chalkboard
- four yardsticks
- a tape measure
- a box
- masking tape

RESOURCES

The following print resources were used in developing this unit and may be useful sources for teachers desiring further information. The audiovisual materials listed in this section may be used at appropriate points in the unit to heighten student interest and reinforce learning.

Print Materials

Corbin, Charles B., and Lindsey, Ruth. Fitness for Life. Teacher's Edition. Glenview, Ill.: Scott, Foresman, and Company, 1979.

Famous Sports Women. Posters of famous sports women, including Billie Jean King, Jane Blalock, Joan Joyce, Mary Ann Harris, and Francine Larrieu. $2.50 each. Available from Women's Sports Enterprises, Box 100, Bayport, N.Y. 11705.

Hunsicker, Paul, and Reiff, Guy G. Youth Fitness Test Manual. 3rd rev. ed. Washington, D.C.: American Alliance for Health, Physical Education, and Recreation, 1976.

McCloy, C. H., and Young, Norman D. Tests and Measurements in Health and Physical Education. 3rd ed. (Part III). New York: Appleton-Century-Crofts, Inc., 1954.

Terry, James W.; Johnson, DeWayne J.; Erickson, Charles R.; and Pendergast, Candis. Physical Activity for All Ages. Dubuque, Iowa: Kendall/Hunt Publishing Co., 1979.

Twin, Stephanie L. Out of the Bleachers: Writings on Women and Sport. Old Westbury, N.Y.: The Feminist Press, 1979.

Audiovisual Materials

Listings

Nonprint Resources in Women's Educational Equity. Princeton, N.J.: Educational Testing Service, 1978. 243 pages. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Stock number 017-080-01836-5.

Positive Images: A Guide to Nonsexist Films for Young People. Produced by Linda Artel and Susan Wingraf, 1976. 176 pages. Available from Booklegger Press, 555 29th Street, San Francisco, Calif. 94131.

Women and Work—New Options: A Guide to Nonprint Media. Produced by Linda Artel, 1979. 76 pages. Available from the Women's Educational Equity Communications Network, operated by the Far West Laboratory for Educational Research and Development, 1855 Folsom Street, San Francisco, Calif. 94103.

Films

All of Us Stronger. Produced by Kartemquin/Haymarket Films, 1976. 9-minute color film about the training of women and girls in self-defense; emphasizes the relationship between self-image and physical strength. Rental $20, sale $175. Available from Serious Business, 1609 Jaynes Street, Berkeley, Calif. 94703.

Hey! What about Us? Sex Role Stereotyping in Physical Activities in School. 15-minute color film (1974) showing the appropriateness of boys and girls participating in the same sports together and then showing scenes in which girls and boys are stopped from participating in activities together. Rental $17, sale $200. Available from Extension Media Center, 2223 Shattuck Avenue, Berkeley, Calif. 94720.

The Flashettes. Produced by Bonnie and Leon Friedman and Emily Parker. 20-minute color film showing how athletic training positively affects the self-image and self-confidence of the girls on a track team from Brooklyn, New York. Rental $35, sale $335. Available from New Day Films, Box 315, Franklin Lakes, N.J. 07417.

Women in Sports—An Informal History. Produced by Dan Klugherz and Arthur Zitrin. 28-minute color film traces the history of women in sports in relation to the prevailing social attitudes. Available from Altana Films, 340 East 34th Street, New York, N.Y. 10016.

Young Women in Sports. Produced by Susan Heich, Jaryl Lane, and Joseph Shields. 15-minute color film (1975) of four high school women athletes (gymnast, discus thrower, swimmer, and track runner) discussing competition and the work involved in sports. Rental $17, sale $215. Available from BFA Educational Media, 2211 Michigan Avenue, P.O. Box 1795, Santa Monica, Calif. 90406.

Part I: Attitudes toward Physical Activity

Introduction

Part I, Attitudes toward Physical Activity, is designed to alert students to female and male differences in attitudes toward physical activity and to explain reasons for these differences. This part of the unit also presents information about the benefits of various physical activities. As a result of completing the lessons in Part I, students will see how negative attitudes toward physical activity can deprive people of these benefits, which transfer into many areas of life and affect the quality of people's lives.

Part I is structured in such a way that on alternate days, students take pretests in six main areas of physical fitness: cardiovascular endurance, muscular endurance, muscular strength, flexibility, agility, and static balance. These pretests prepare the students for Part II, which contains activities designed to improve students' attitudes toward, and abilities in, these six areas of fitness. Background information about each area is given with the appropriate lesson. You may wish to display full-page illustrations of each area of fitness or distribute visuals to help students remember an activity related to each area.

Part I is designed to take approximately ten days of class time.

Note: You will need to make preparations for Lesson 9, since the lesson includes a visit to the class by at least one female and one male adult currently involved in a program of physical activity. It is recommended that you arrange for the visit at least a week before teaching the lesson.

Lesson 1: Differences in Attitudes among Individuals

Purpose

To help students explore their own opinions about the physical capabilities of females and males and the activities appropriate for each

Student Objectives

- To identify physical activities the students enjoy and to describe any differences between girls' and boys' responses in identifying such activities
- To hypothesize why girls and boys often have different attitudes toward physical activity

Generalizations

- Girls and boys often have different attitudes toward their own participation in various physical activities.
- Such attitudinal differences are reflected in, and perpetuated by, cultural stereotypes about appropriate female and male behavior.
- As opportunities for participation in physical activities increase for both females and males, stereotypes can be reevaluated according to empirical evidence.

Equipment: chalkboard, or paper and pencil

Activity A:
What physical activities do girls and boys like?
(40 minutes)

A-1 Ask students to name all the physical activities they can think of. Explain that physical activities include individual and group sports, and all forms of physical exercise. List student responses on the board or on a sheet of paper large enough for students to read.

A-2 Ask students to read through the activities and decide which three or more activities each would like to participate in the most. To tally answers, read each activity to the students and write down how many girls and how many boys rank each activity as one of their favorites.

A-3 Ask students these questions for discussion:

a. Which activities did girls prefer?

b. Which activities did boys prefer?

c. Are the favorite activities of girls and boys different or similar?

d. If favorite activities are different for girls and boys, why do you think they are different? Do people's attitudes cause these differences? If so, how?

Possible answers: In our culture, girls and boys have been taught that certain kinds of physical activities are appropriate for females and others for males. As a result, girls have had fewer opportunities to get involved in football, basketball, boxing, and other "male" sports. Even sports such as track, tennis, and golf did not

draw widespread female participation until the last decade. Also, females and males are taught such stereotypes as "the female is the weaker sex" and "rough, competitive physical activity is not appropriate for females." Consequently, females have often been conditioned to prefer quieter, less rough, less competitive sports—to prefer to be spectators instead of participants. Males have often been taught that to be masculine, they must be tough.

During the last decade, cultural definitions of being a female or a male have expanded. More women are working, and women are being encouraged legally as well as through the media to participate in some sports. However, the message is still mixed, at best. Stereotypes abound in the media, and many sports are still represented as "male" sports.

A-4 For each activity on the list, have students decide whether it has primarily a female image, a male image, or both.

Note: You may need to explain to students that a male or female image of an activity refers to whether people view the activity as more appropriate for one sex than for the other.

A-5 Ask students to compare the image with reality. For example, do females play football and basketball? Do males become cheerleaders or ballet dancers?

Answer: All sports can and should be enjoyed by both females and males. This doesn't mean that there should never be female or male teams (although in many sports females and males compete together); it does mean that sports benefit females and males in the same ways and therefore should be enjoyed by both.

Activity B:
Finding evidence of change

Ask students to watch television, observe community events, and/or read the newspaper to find evidence of increasing female participation in amateur and professional physical activities. For example, students may observe the number of female participants in local or regional races, or find news about female participants in various sports or athletic events. Have students report on the evidence they find.

Statistics show much evidence of change. According to the Women's Sports Foundation, 33 percent of all high school athletes are female—a figure six times larger than the number in the early 1970s. Since 1970, the number of female tennis players has more than tripled, and the number of women golfers has become five times as large. One-third of the nation's joggers are women. In 1976, female rowing crews competed in the Olympics for the first time, and in 1970, Diane Crump became the first female jockey to ride in the Kentucky Derby. In 1980, the U.S. Soccer Federation reported that more than one million girls under age 19 were playing soccer in this country; in 1970, almost none were playing. Finally, in 1980, according to six sports federations (golf, tennis, bowling, skiing, racquetball, and basketball), financial rewards for professional female athletes totaled more than $16 million, a huge increase over the $1 million a decade ago.

Lesson 2: Pretest for Cardiovascular Endurance

Purpose

To measure students' cardiovascular endurance

Student Objectives

- To define the meaning and importance of cardiovascular endurance
- To participate in Cooper's 12-minute test* to measure students' cardiovascular endurance

Generalizations

- Cardiovascular endurance is the ability of the heart, lungs, and circulatory system to supply fuel and oxygen to the working muscles during exercise.
- Cardiovascular endurance is strengthened through activities that place a considerable demand on the circulatory-respiratory system.

Equipment: stopwatch, pencils and slips of paper for students, track or measured distance

*Kenneth H. Cooper, *The Aerobics Way* (New York: M. Evans and Company, Inc., 1977), p. 88.

Cardiovascular endurance

Activity A:
What is cardiovascular endurance and why is it important? (5 minutes)

A-1 Explain to students that the goal of the unit is to help them improve their individual levels of physical fitness in six areas. Explain that in the next two weeks they will pretest themselves in each area, and at the end of the unit, they will take posttests to see how much improvement they have made.

A-2 Use the background information that follows to explain briefly to students the meaning and importance of cardiovascular endurance—the first area for which they will pretest.

A-3 Stress that students should be concerned with developing their individual potential, not with how they compare with one another.

A-4 Display illustrations of activities related to cardiovascular endurance or distribute visuals which will help students remember an activity related to this area.

Background Information: Cardiovascular Endurance

Cardiovascular endurance is the ability of the heart, lungs, and circulatory system to supply fuel and oxygen to the working muscles during exercise. A person who has good cardiovascular endurance has a strong heart, strong lungs, and clear, well-developed blood vessels. (Cardio is another word for heart, and vascular refers to blood vessels.) This area of fitness is the most important in generally helping an individual to feel good and enjoy life. A person who has good cardiovascular endurance can work harder and longer with less effort and without tiring quickly. Also, according to scientific evidence, such a person is less likely to suffer from heart or lung disease.

Both girls and boys can improve their cardiovascular endurance. To do this, they must exercise for extended periods of time, thereby placing a considerable demand upon the circulatory-respiratory system. The amount of exercise necessary to produce improvement depends, of course, upon individual factors such as current level of endurance and amount of musculature. Generally, the greater the proportion of total body involved in the activity, the greater the demand placed on the circulatory-respiratory system. Activities requiring both intensity and duration, performed on a regular basis, are best for improving cardiovascular endurance. Irregular physical activity will not improve endurance.

The following activities are suggested for improving cardiovascular endurance: walking, tennis, badminton, jogging, cycling, soccer, swimming, rowing, running, rope skipping, and bench stepping.

Activity B:
Measuring cardiovascular endurance
(25 minutes)

This pretest is Cooper's 12-minute run-walk test. However, Cooper's norms are not included in this unit, since students should be concerned only with improving their own scores and not with comparing their scores and others'. In Lesson 11, you may wish to provide students with information about class scores for each pretest, such as highest, lowest, highest female, highest male, median score, and so on.

B-1 Have students choose a partner of the opposite sex, or randomly assign partners of the opposite sex. Explain to students that the reason for this kind of pairing is to emphasize the similarities between girls and boys, rather than to exaggerate their differences. Such pairing will help them work together in the future and help reduce attitudes based on stereotypes.

B-2 Explain the procedure for Cooper's 12-minute run-walk test to the students:

- This run-walk exercise measures a person's cardiovascular endurance.
- Try to cover as much distance as possible in 12 minutes.
- Do not start too fast.
- Try to develop a rhythm in running and breathing.
- Quicken your pace at the end of the time period.
- Walk for a minute upon completion of the run to allow the circulatory system to decrease in activity.

B-3 Have half the students do the 12-minute run-walk while their partners keep track of their distance (count laps, for example). Be sure that each group includes an even balance of boys and girls.

B-4 Have the other half of the students do the 12-minute run-walk while their partners keep track of their distance.

B-5 At the end of each 12 minutes, have each person's partner record the person's name and distance on a slip of paper to be submitted to you at the end of class.

B-6 Use the Pretest Record Sheet that follows to record results for each student. You will need to determine, in miles, the distance each student ran.

Student name	Pretest Record Sheet											
	Cardiovascular endurance	Muscular endurance			Muscular strength		Flexibility			Agility	Static balance	
	Cooper's 12-minute test	Side stand	Leg raise	Prone trunk lift (timed)	Vertical jump	Flexed-arm hang	Sit and reach	Arm and shoulder reach	Prone trunk lift (measured)	Illinois Agility Run	Stick stand	
	Laps/miles	Sec.	Sec.	Sec.	Height	Number	Inches	Inches	Inches	Time/rank	Trial 1 Sec.	Trial 2 Sec.

Student name	Pretest Record Sheet											
	Cardiovascular endurance	Muscular endurance			Muscular strength		Flexibility			Agility	Static balance	
	Cooper's 12-minute test	Side stand	Leg raise	Prone trunk lift (timed)	Vertical jump	Flexed-arm hang	Sit and reach	Arm and shoulder reach	Prone trunk lift (measured)	Illinois Agility Run	Stick stand	
	Laps/miles	Sec.	Sec.	Sec.	Height	Number	Inches	Inches	Inches	Time/rank	Trial 1 Sec.	Trial 2 Sec.

Lesson 3: Physiological Differences in Individuals

Purpose

To examine female and male physiological differences

Student Objective

- To understand that identifying individual body type is usually a more accurate way to evaluate physical aptitude than identifying a person's sex

Generalizations

- Differences between individuals of the opposite sex are often not as great as differences between individuals of the same sex.
- There is nothing inherently superior or inferior about the structure or function of either sex.
- The effects of physical activity are almost identical for females and males, with the exception of bulky musculature, which may be an effect in males but not in females.
- Individual aptitude can be assessed more accurately according to body type (ectomorph, mesomorph, and endomorph) than according to sex.

Special Preparations

Student Handout: Body Types must be reproduced for students.

Equipment: screen and light (optional)

Activity A:
Female and male physical differences
(10 minutes)

What are physiological differences between females and males?

A-1 Ask students to hypothesize about female and male physical potential. Students will probably say that boys are stronger than girls. Other commonly believed myths are:

- Too much exercise might keep a woman from having children.
- Women cannot increase their strength.
- Men usually cannot do activities that require grace and flexibility.

A-2 Explain to students that the following are the main differences between female and male physical potential.

- Males have a higher ratio of muscle mass to total body weight. But both females and males can improve their muscular strength through exercise. (Make sure to inform girls that an increase in muscular strength won't cause the development of bulky muscles in girls, because of the presence of female hormones.)
- Females often develop (learn) neuro-muscular skills more quickly than males. Such skills involve balance, agility, and coordination. Both females and males, however, can improve their motor skills through practice.

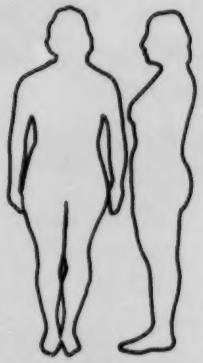
A-3 Emphasize to students that tremendous overlap occurs in female and male physical abilities. That is, there are many more similarities than differences. As females increasingly participate in physical activities, it becomes evident that abilities among the two sexes are potentially very close. Emphasize that many stereotypes exist about differences in female and male physical potential. As more females participate in activities and sports, many of these stereotypes are weakened.

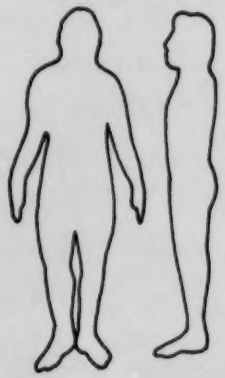
Activity B: A more accurate gauge of individual differences (40 minutes)

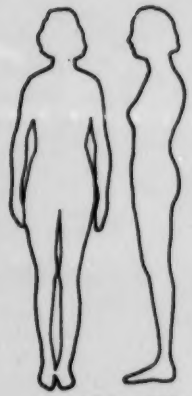
B-1 Make copies of the Student Handout: Body Types (page 25) and distribute the copies to students.

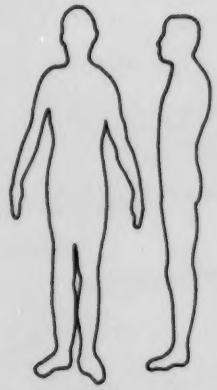
B-2 Use the handout to explain to students that body type is a better gauge of physical aptitude than the sex of of person is.

Student Handout: Body Types









Endomorph Characteristics

1. The body tends to be somewhat round.
2. The body is equally (or nearly equally) thick from front to back and from side to side.
3. The shoulders are square and high.
4. The abdomen is larger than the chest.
5. The neck is thick and short.

Mesomorph Characteristics

1. The body is square, with hard or prominent muscles.
2. The bones are large and are covered with thick muscle.
3. The shoulders are broad.
4. The abdominal muscles are thick.
5. The wrist, hand, and fingers are relatively heavy.
6. The legs, trunk, and arms are massive.

Ectomorph Characteristics

1. The body appears angular.
2. The bones are small and the muscles are slender.
3. There is relatively no body thickness.
4. The limbs are long in relation to the body.

Note: Many people are a combination of two body types. For example, a meso-endomorph possesses characteristics of a mesomorph and an endomorph. An ecto-mesomorph possesses characteristics of an ectomorph and a mesomorph.

B-3 Go over the handout with students. Make sure they understand the descriptions of the basic body types. Explain how body type relates to physical ability:

- The endomorph has an advantage in activities requiring pure strength, such as lifting, pushing, and pulling. In activities requiring a lot of agility, flexibility, or mobility, however, the endomorph usually cannot compete as well as other body types can.
- The mesomorph usually has the advantage in activities requiring both power and mobility, such as football and wrestling.
- The meso-endomorph is also powerful, possessing great amounts of strength. This body type can perform work of low or moderate intensity for an extended period of time. In rowing, mountain climbing, and parallel bar activities, for example, the meso-endomorph usually has the advantage.
- The ecto-mesomorph and the ectomorph usually have an advantage in sports requiring cardiovascular and muscular endurance—in running, basketball, and tennis, for example—but may be at a disadvantage in activities requiring muscular strength.

B-4 Ask each student to determine whether she or he is an ectomorph, an ecto-mesomorph, a mesomorph, a meso-endomorph, or an endomorph. Explain that middle school students are still developing and that they can't be sure of their body type until they are adults. You may want to ask students to determine the body types of their closest relatives.

B-5 Obtain a screen and a light. Have volunteers (or the entire class) take turns standing between the screen and the light so that a silhouette appears on the screen. Have the volunteers position themselves for a front and a side view. Ask other students to identify the probable body type. (If you cannot obtain a screen and light, you may ask volunteers simply to stand up.) This activity should be handled carefully to avoid hurting students' feelings. Be sure to indicate that each body type shows advantages for certain types of physical activities.

B-6 Ask students: Were there both males and females for all body types? What does this tell us about physical ability? (See Generalizations on page 21.)

Lesson 4: Pretest for Muscular Endurance

Purpose

To measure students' muscular endurance

Student Objectives

- To define the meaning and importance of muscular endurance
- To participate in three pretests for measuring muscular endurance: side stand, timed leg raise, and prone trunk lift

Generalizations

- Muscular endurance is the ability of the muscles to work for long periods of time without getting tired.
- Endurance of a particular muscle can be improved by doing many repetitions of an exercise that requires use of that muscle, and by gradually increasing repetitions.

Special Preparations

Before class, you will need to set up three stations for Activity B.

Equipment: two stopwatches (or watches with a second hand), pencils and slips of paper for students

Muscular endurance

Activity A:
What is muscular endurance and why is it important?
(5 minutes)

A-1 Use the following background information to explain briefly to students the meaning and importance of muscular endurance.

A-2 Point out to students that they should be concerned with improving their own skills. How they compare with other students now is not as important as how much they can improve during the year.

A-3 Display illustrations of activities involving muscular endurance or distribute visuals which will help students remember an activity related to this area.

Background Information: Muscular Endurance

Muscular endurance is the ability of the muscles to work for long periods of time without getting tired. It is important in everyday life and in many sports. (Make sure students know the difference between cardiovascular endurance, which is endurance of the heart muscle, and muscular endurance, which is endurance of other muscles.) Good muscular endurance allows the muscles to lift longer; good muscular strength allows the muscles to lift more. People who have good muscular endurance are less apt to have backaches, and they find it easier to maintain good posture. Both girls and boys can improve their muscular endurance through appropriate activities.

In order to improve muscular endurance, a person should work on major body areas such as arms and shoulders, abdomen and back, and legs. Specific muscles must be exercised. The muscles should be contracted many times against a light weight or resistance. The key to muscular endurance is to do the exercise many times, gradually increasing the repetitions. Exercises should be rotated to improve endurance of each of the large muscles in the body.

A person can use either isotonic or isometric exercises to improve muscular endurance. Isotonic exercise, such as sit-ups or push-ups, involves repetition of movement with manipulation of two factors: weight (load) and rate of execution. Isometric exercise involves contraction of opposing muscles to improve muscle tone, as when a person presses the hands together in order to exercise arm muscles.

The following activities improve muscular endurance: rope climbing, pegboard climbing, overhead ladder activities, parallel bar activities, horizontal bar activities, weight training, wrestling, tennis, jogging, golf, bowling, surfing, swimming laps, cycling, hiking, and rowing.

Activity B:
Measuring muscular endurance
(25 minutes)

B-1 Have students choose a partner of the opposite sex. Divide the class into three groups, keeping partners together.

B-2 Explain and demonstrate to students the procedure for the following pretests of muscular endurance.

- The side stand tests leg muscles.

  a. Lie on your right side and use both hands to get your body supported over the right hand.

  b. Keeping the body stiff, raise the left arm and leg in the air.

  c. Hold this position while someone uses a stopwatch or watch with a second hand to count up to 30 seconds, or until you tire.

  d. Repeat the procedure for the left side.

  e. Have your partner record the length of time held for each side.

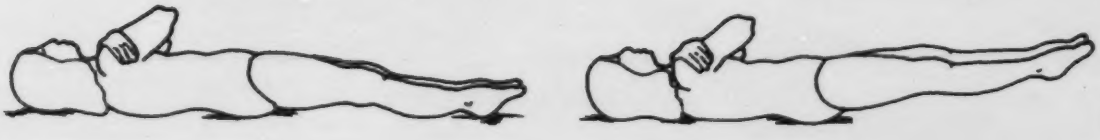
- A timed leg raise tests the muscles in the legs and abdomen.

  a. Lie flat on your back with arms folded across the chest and legs straight.

  b. Raise heels six inches off the ground.

  c. Hold until fatigued.

  d. Have your partner record the length of time your legs are held above the ground.



- The prone trunk lift tests the upper and lower back muscles.

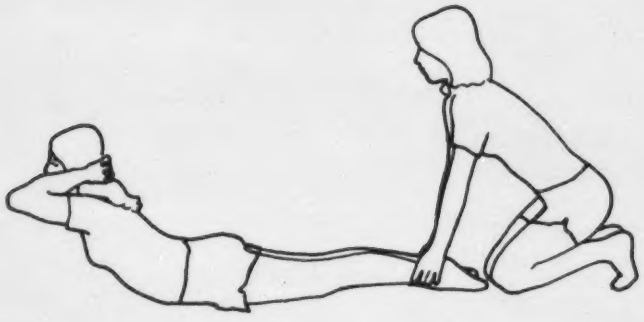
  a. Lie on your stomach on the floor.

  b. Clasp your hands behind your neck.

  c. While your partner holds your feet down, lift your head and entire chest slowly off the floor.

  d. Hold until fatigued.

  e. Have your partner record the length of time your head and chest are held off the floor.



B-3 Explain to students that:

- They should proceed from one station to another in groups.
- Someone at each station will use a stopwatch to count seconds when necessary.
- They should do each pretest once, alternating with their partner to provide a rest period between tests.
- They should write down their partner's name and pretest results on a slip of paper to be submitted to you after everyone has finished.

B-4 Record the results for each student on the Pretest Record Sheet.

Activity C:
Feelings about working with partners
(5 minutes)

Ask students the following questions about their feelings toward working with a partner of the opposite sex:

C-1 How do you feel about working with a partner of the opposite sex? Why?

C-2 Where do you think your attitude came from?

Answers: Parents, friends, the media, and so on.

C-3 What benefits can you obtain by working with a partner of the opposite sex?

Answer: Explain to students that working with partners can help girls and boys understand their similarities instead of exaggerating their differences. This pairing will help girls and boys work together in the future, and help avoid attitudes based on stereotypes. Some students' attitudes may be extremely negative. If so, allow them to voice their attitudes but ask them to defend them on logical, empirical grounds. Try to point out to students that stereotypes are unfair generalizations since they don't take into consideration individual differences. For example, the stereotype that "girls are weak" either physically or emotionally is unfair to girls.

Lesson 5: Physical Benefits of Activity

Purpose

To help students become aware of the physical benefits of activity

Student Objectives

- To identify the six major areas of fitness covered in this unit and the definition and benefits of each
- To state at least three physical benefits of activity (see pages xi-xii for a list of these)

Generalizations

- Physical activity enhances the physiological well-being of people and helps them lead a more active life.
- Both females and males benefit from physical activity.

Special Preparations

Student Handout: Six Areas of Fitness must be reproduced for students

Equipment: none

Activity A:
Transition
(5 minutes)

Remind students that females and males have many more similarities than differences. Both females and males benefit in the same ways from physical activity. Even in weak areas (muscular strength for many girls and agility for many boys), much improvement can be made through practice.

Activity B:
Six areas of physical fitness
(5 minutes)

Give students a copy of the handout on page 43 and/or use the teacher information on pages 44-45 as a basis for a discussion about fitness.

Suggestion: Instead of presenting the information as a simple discussion, you may want to spend a few days on this lesson by combining the information with the activities beginning on page 103. Each activity in that part of the unit is related to an area of fitness. As you explain each area of fitness to the students, have them do an exercise that is related to the fitness area. Then choose exercises and ask students which area of fitness each exercise improves.

Student Handout: Six Areas of Fitness

Physical fitness is the ability of the body to work efficiently (to do the most work with the least effort). There are several kinds of fitness. The major ones are explained below.

1. **Cardiovascular endurance** is the ability of the heart, lungs, and circulatory system to supply fuel and oxygen to the working muscles during exercise.

   Activities such as jogging, running, and swimming can help you improve in this area.

2. **Muscular endurance** is the ability of the muscles to work for a long time without getting tired.

   Activities such as rope climbing, swimming laps, surfing, and hiking can help you improve in this area.

3. **Muscular strength** is the amount of force a muscle can exert.

   Activities such as football, gymnastics, soccer, backpacking, and rowing can help you improve in this area.

4. **Flexibility** is the ability to use the joints fully—elbows, wrists, knees, hips, ankles, finger joints, and so on.

   Activities such as gymnastics and dance can help you improve in this area.

5. **Agility** is the ability to change body position or direction while moving at full speed.

   Activities such as wrestling, gymnastics, soccer, dodgeball, and basketball can help you improve in this area.

6. **Static balance** is the ability to keep an upright position while standing still.

   Activities such as surfing, gymnastics, and waterskiing can help you improve in this area.

Teacher Information for Student Handout: Six Areas of Fitness

Physical fitness is the "ability of the body, including the muscles, skeleton, heart, and all other body parts, to work together efficiently, which means able to do the most work with the least effort."* Physical activity that is purposeful, directed, and based on individual need contributes to physical fitness. Physical fitness can be divided into six major areas: cardiovascular endurance, muscular endurance, muscular strength, flexibility, agility, and static balance.

Cardiovascular endurance: The ability of the heart, lungs, and circulatory system to supply fuel and oxygen to the working muscles during exercise. (Cardio means heart; vascular means blood vessels.) This area of fitness requires a strong heart, strong lungs, and clear, well-developed blood vessels.

Benefits: Able to work harder and longer with less effort and without tiring quickly.

How to Improve: Exercise for extended periods of time, thereby placing a demand on the circulatory and respiratory systems. The person must do exercises that require both intensity and duration, and do these exercises on a regular basis.

Activities: jogging, running, rowing, swimming.

Muscular endurance: The ability of the muscles to work for long periods of time without getting tired. (Cardiovascular endurance requires strength of the heart muscle, whereas muscular endurance requires strength of the other muscles.)

Benefits: Able to lift loads for a longer period of time than someone with poor muscular endurance; likely to have fewer backaches and better posture.

How to Improve: Contract muscles many times against a light weight or resistance.

Activities: rope climbing, overhead ladder activities, parallel bar activities, swimming laps, surfing, hiking, bicycling, rowing.

*Charles B. Corbin and Ruth Lindsey, *Fitness for Life*, Teacher's Edition (Glenview, Ill.: Scott, Foresman, and Company, 1979), p. 7.

Muscular strength: The amount of force a muscle can exert.

Benefits: Easier to jump, lift, pull, and push; enables a person to have good posture and participate in various sports.

How to Improve: Make muscles lift more than normal, gradually increasing the amount lifted.

Activities: football, gymnastics, mountain climbing, soccer, backpacking, volleyball, rowing, bicycling, judo, karate.

Flexibility: The ability to use the joints fully.

Benefits: Enables free movement and fewer injured muscles.

How to Improve: Stretch the muscles further than normal.

Activities: gymnastics, dance, football, mountain climbing.

Agility: The ability to change body position or direction quickly, while moving at full speed.

Benefits: Enables quick movement of the body.

How to Improve: Practice quick change of body position or direction.

Activities: wrestling, boxing, gymnastics, soccer, dodgeball, football, basketball, ice hockey, field hockey.

Static balance: The ability to keep an upright position while standing still.

Benefits: Enables more control over body position.

How to Improve: Practice holding an upright posture for increasing periods of time.

Activities: surfing, gymnastics, waterskiing, mountain climbing.

Activity C:
General physical benefits of activity
(20 minutes)

C-1 Discuss with students the following physiological benefits of physical activity (see pages xi-xii for more information):

- Enables more productivity on the job or during the day
- Prevents disease and bad health
- Enables participation in sports
- Enables one to feel good—that is, not overweight, and having good muscle tone and good posture

C-2 Read the following true-false statements to students. After each statement is discussed, explain to students the correct answer.

a. Girls cannot be feminine if they are physically strong and aggressive in sports.

(False. Most girls who participate in sports say that they feel happy, healthy, and attractive. Also, research shows that physical activity benefits both females and males in the same ways. Finally, heavy physical activity does cause girls to become strong but does not usually cause the development of bulky muscles.)

b. People who participate in physical activities do not usually have energy left to do other activities.

(False. Physical fitness enables a person to have more energy.)

c. It is healthier for females to relax comfortably than to engage in physical activity.

(False. Both females and males can benefit from physical activity.)

d. Sweeping the kitchen once a day improves muscular endurance more than having a job sweeping several hours in a row.

(False. Just the opposite is true.)

e. Jogging mainly improves muscular strength.

(False. Jogging improves cardiovascular endurance.)

f. Playing dodgeball improves agility more than rope climbing does.

(True.)

g. Physically active people are less likely to suffer heart attacks when they are older.

(True. Studies show that exercise improves the strength of the heart.)

h. People who develop a regular program of physical activity are less likely to be overweight than inactive people.

(True. Exercise enables a person to burn up more calories.)

i. Girls do not need as much physical activity as boys do.

(False. Everyone needs physical activity to stay physically fit.)

j. Girls who gain physical power lose their femininity.

(False. Girls' hormones prevent the development of bulging muscles; if anything, physical fitness enhances attractiveness.)

k. Contact sports are not appropriate for girls, because of the female body structure.

(False. Both females and males are able to develop strength to participate in contact sports. The female body structure is not more vulnerable than the male body structure.)

l. Physical activity during the day helps a person sleep better at night.

(True. People who engage in physical activity tend to sleep more deeply and therefore need fewer hours of sleep.)

m. More and more girls are participating in physical activities because of the physiological benefits.

(True. Benefits include productivity, health, and participation in sports. Note: See pages xi-xii for a more thorough listing of benefits.)

n. Both girls and boys now receive many educational and professional opportunities to participate in sports.

(True. Title IX of the Education Amendments of 1972 provides that "no person in the United States shall, on the basis of sex, be excluded from participation . . . under any educational program or activity receiving Federal financial assistance." As a result, more scholarship money as well as better educational facilities are available to females. For more information, see page 8.)

o. Good physical fitness enables a person to participate in a greater variety of activities.

(True.)

Lesson 6: Pretest for Muscular Strength

Purpose

To measure students' muscular strength

Student Objectives

- To define the meaning and state the importance of muscular strength
- To participate in two pretests for measuring muscular strength: the vertical jump and the flexed-arm hand

Generalizations

- Muscular strength is the amount of force a muscle can exert.
- Strength of a muscle can be achieved through exercises that place a demand on that particular muscle.

Special Preparations

Before class, you will need to set up two stations for Activity B. One station should have a vertical measuring stick or tape measure secured to a wall. The other station should have an adjustable parallel bar or gym bar.

Equipment: yardstick or tape measure, pencils and slips of paper for students, horizontal bar approximately 1½ inches in diameter (or a doorway gym bar or a pipe), stopwatch, masking tape

Muscular strength

Activity A:
What is muscular strength and why is it important?
(5 minutes)

A-1 Use the following background information to explain briefly to students the meaning and importance of muscular strength.

A-2 Stress that students should be concerned with developing individual potential, not with how they compare with one another.

A-3 Display illustrations of activities involving muscular strength or distribute visuals which will help students remember an activity related to this area.

Background Information: Muscular Strength

Muscular strength is the amount of force a muscle can exert. Muscular strength helps people jump, lift, pull, push, and perform other activities. Thes muscles that move the parts of the body are called skeletal muscles and are attached to the bones of the body. Strong skeletal muscles enable a person to have good posture. Muscular strength is also necessary for successful participation in various sports.

Both girls and boys can improve their muscular strength. Girls should be alerted to the fact that doing exercises to improve muscular strength will not cause them to develop large, bulging muscles, since the hormones in girls' bodies prevent this from happening.

To improve muscular strength, a person must work the muscles more than normal (lift more than normal), gradually increase the amount lifted, and exercise specific muscles. A person can use either isotonic or isometric exercise to improve muscular strength.

Activities that require muscular strength include ballet, backpacking, football, gymnastics, soccer, judo, karate, mountain climbing, rowing, skiing, and volleyball.

Activity B:
Measuring muscular strength
(25 minutes)

B-1 Have students choose a partner of the opposite sex. Divide the class into two groups, keeping partners together.

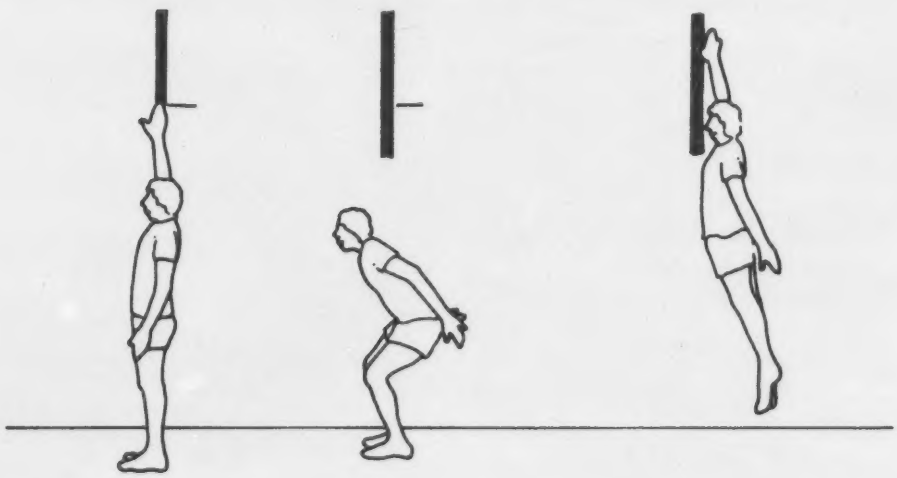
B-2 Explain to students the procedure for the pretests for muscular strength:

- The vertical jump tests the strength of the leg muscles.

  a. Stand against the wall. Raise the arm which is next to the wall to its maximum height along the measuring tape.

  b. Jump and hit the tape measure at the top of the jump.

  c. Have your partner determine the difference between the two measurements.



- The flexed-arm hang tests the strength of the arm muscles.

  a. Make sure the height of the bar is adjusted to be close to your body height.

  b. With the assistance of your partner, raise your body off the floor to a position where your chin is above the bar, your elbows are flexed, and your chest is close to the bar.

  c. Hold this position as long as possible. Have your partner use a stopwatch to time the length you hold. Have your partner stop the watch when your head tilts backward to keep your chin above the bar, or when your chin falls below the level of the bar.

B-3 Explain to students that:

- They should proceed from one station to another in groups.
- Someone at each station will use a stopwatch to count seconds when necessary.
- They should do each pretest once, alternating with their partner to provide a rest period between tests.
- They should write down their partner's name and pretest results on a slip of paper to be submitted to you after everyone has finished.

B-4 Record the results for each student on the Pretest Record Sheet.

Lesson 7: Psychological and Social Benefits of Physical Activity

Purpose

To help students become aware of the psychological and social benefits of physical activity

Student Objective

- To identify psychological and social benefits of physical activity

Generalizations

- Each individual can benefit both psychologically and socially from a program of physical activity.
- Physical activity is conducive to increased mental activity and the development of social skills.

Equipment: none

Activity A:
Psychological benefits of physical activity
(10 minutes)

Paraphrase or read to the students the following paragraphs. Then ask them the questions that follow.

> Not long ago, Pennsylvania State University conducted an experiment to see if physical activity had any effect on how well students did in their studies. Two groups of high school seniors were given the Scholastic Aptitude Test (a test that many students take as a college entrance requirement).
>
> One group then went through a six-month physical training program along with its normal study and play schedule. The other group had no special program of physical activity. At the end of the experiment, the two groups took the test again.

A-1 What do you think were the results of the second test? Do you think physical training can help students do better in their studies? (Let students think of answers before you tell them.)

Results: The scores of the group that had no special program of physical activity remained about the same as the previous scores. But the scores of the group that had physical training increased dramatically.

A-2 What do the results show about the benefits of physical activity?

Answer: Physical activity is conducive to mental activity. Physical activity expands one's ability to be productive, stimulates metabolism, and increases blood flow, all of which improve the functioning of the brain.

A-3 Explain to students that some scientific evidence shows that there is a positive relationship between epinephrine (a hormone released by the body during exercise) and the feeling of happiness. Epinephrine stimulates metabolism, increases blood flow, and dilates the bronchioles.

Activity B: Social benefits of physical activity (15 minutes)

B-1 Write the following list of words and phrases on the board (or duplicate them for students).

- successful
- aggressive or assertive
- able to cope with both winning and losing
- competitive
- cooperative
- shows team spirit
- enthusiastic
- motivated
- self-disciplined
- alert
- a good leader
- works hard to reach goals
- sets realistic goals
- respects rules

If you prefer, let students make their own list first. In this case, ask them to write words that describe how participation in physical activity can benefit a person's character. Make sure students understand what each word in the list means.

B-2 Ask students: How can each characteristic be gained through physical activities?

Sample answer: Participation in team sports teaches cooperation, team spirit, and respect for rules, all of which are necessary for a team to be successful.

B-3 Read the following paragraph to the students:

> Samantha was a member of her high school basketball team, the Orioles. They had just lost a game to their cross-town rivals, the Bruins. Samantha was disappointed. They had all practiced hard and played their best. Everyone had cooperated and the score had been close. She told her teammates, "If we work a little harder, we can beat them next time." Everyone enthusiastically agreed.

Now read to the students the list of desirable social characteristics from B-1. Ask: Which of these characteristics are shown by Samantha and her teammates?

Answer: Successful in the sense that the score was close, able to cope with losing, competitive, cooperative, showed team spirit, enthusiastic, motivated, self-disciplined, worked hard to reach goal, set realistic goal.

B-4 Read the following paragraph to the students:

> Teresa and Joe were managers for a vending machine company. They were responsible for setting sales goals for the company and for meeting these goals. They headed a team of sales workers. Joe and Teresa had to work hard and be alert for opportunities. Because they were good leaders, the people on their team cooperated enthusiastically. Their team had successfully expanded sales into five new states. Their new goal was to move into three more states by the end of the year.

Now read the list in B-1 to students again. Ask: Which of these characteristics are shown by the people in this business situation? Do you think that sports (both team and individual) can help people develop characteristics that they can use in their social and business lives?

Answer: Successful, assertive, cooperative, enthusiastic, motivated, alert, good leaders, work hard to reach goals, set realistic goals. All of these characteristics, which can be gained through physical activity, can transfer into other areas of life.

B-5 Ask students: Do you think it is important for both girls and boys to participate in physical activity? Why?

Answer: In the past, males have had an advantage because they have been given more opportunities and encouragement to participate in competitive sports, as well as in other forms of physical activity. As a result, males have had more opportunities to develop the attitudes and skills required for certain kinds of success. Now girls have increased opportunities to take more active roles in society. To take advantage of opportunities, girls and boys must be assertive. That is, they must set realistic goals and actively work to achieve them. Participating in physical activity can help people learn to do this.

Activity C: Summary (20 minutes)

Help students summarize the nature and benefits of physical activity (Lessons 1, 3, 5, and 7). First read the following true-false statements, asking students to write down their answers; then supply the correct answers and discuss each point.

C-1 The best way to determine a person's physical ability is according to whether the person is a boy or a girl.

(False. Body type is a much better way.)

C-2 Girls are not able to participate in competitive sports such as football.

(False. Both girls and boys can and should participate, since competitive sports can teach them important skills that transfer to other areas of life.)

C-3 Boys benefit more from physical activity than girls do.

(False. Girls and boys benefit equally from physical activity.)

C-4 Some studies show that increased physical activity contributes to increased mental ability.

(True. See A-1 of this lesson.)

C-5 Team and individual sports contribute to a person's social skills.

(True.)

C-6 During exercise, a hormone that contributes to a feeling of happiness is released.

(True. See A-3.)

C-7 Physical activity decreases people's chances of having heart attacks and otherwise being in poor health.

(True.)

C-8 There are only two basic body types: mesomorph and endomorph.

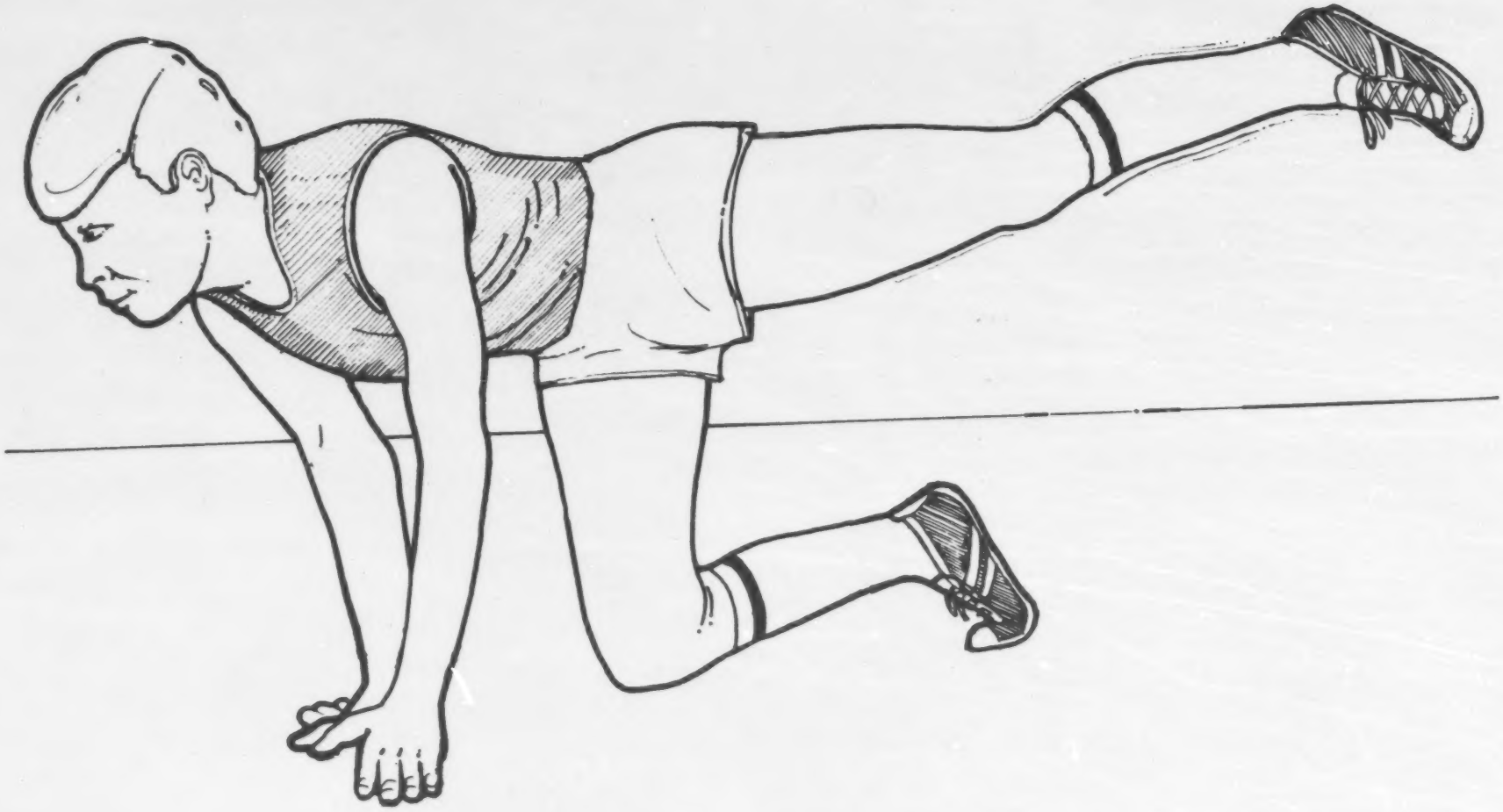
(False. There are three. The other is ectomorph.)

C-9 If people exercise, they probably won't have enough energy left to proceed through the rest of the day.

(False. Exercise on a regular basis increases the energy available to a person, since it improves physical fitness—the ability to do more work with less effort.)

C-10 Name the six areas of fitness you will be working on in this unit and briefly define each.

(Cardiovascular endurance, muscular endurance, muscular strength, flexibility, agility, and static balance. For definitions, see Lessons 2, 4, and 6.)



Flexibility

Activity A:
What is flexibility and why is it important?
(5 minutes)

A-1 Use the following background information to explain briefly to students the meaning and importance of flexibility.

A-2 Stress that students should be concerned with developing their individual potential, not with how they compare with one another.

A-3 Display illustrations of activities related to flexibility or distribute visuals which will help students remember an activity related to this area.

Background Information: Flexibility

Flexibility is the ability to use the joints fully (elbows, shoulders, wrists, hips, knees, and so on). People who have good flexibility can move freely and are less likely to have lower back pain or to injure muscles.

There are two kinds of flexibility: static and dynamic. Static flexibility is the ability to move the muscle slowly through a wide range of motions. Dynamic flexibility is the ability to move a muscle quickly through its range of motions.

Both girls and boys can improve their flexibility. They can do this by stretching muscles further than normal and exercising specific muscles and joints that they want to improve.

Activities requiring flexibility include gymnastics, dance, football, and mountain climbing.

Lesson 8: Pretest for Flexibility

Purpose

To measure students' flexibility

Student Objectives

- To define the meaning and state the importance of flexibility
- To participate in three pretests for measuring flexibility: sit and reach, arm and shoulder reach, and prone trunk lift

Generalizations

- Flexibility is the ability to use the joints fully.
- To improve flexibility, a person must stretch muscles further than normal and exercise the specific muscles and joints the person wants to improve.

Special Preparations

Before class, you will need to set up three stations for Activity B.

Equipment: one board or box, four yardsticks, pencils and slips of paper for students

Activity B:
Measuring flexibility
(25 minutes)

B-1 Have students choose a partner of the opposite sex. Divide the class into three groups, keeping partners together. (For prone trunk lift (p. 75), a third person is needed.)

B-2 Explain to students the following procedure for the pretests for flexibility:

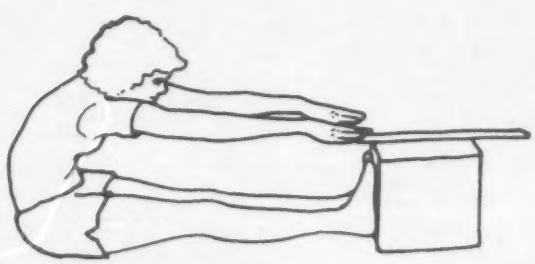
- The sit and reach measures the flexibility of the lower back muscles and the back leg muscles.

  a. Sit on the floor with your legs together and your arms extended in front of you.

  b. Place your feet against a board or box.

  c. Keeping your legs straight, slowly reach as far as you can with your hands and hold that position for three seconds.

  d. Have your partner use a yardstick—which is extended six inches over the board or box toward you—to measure the distance you reached. If you reached your toes, the distance will be six inches.



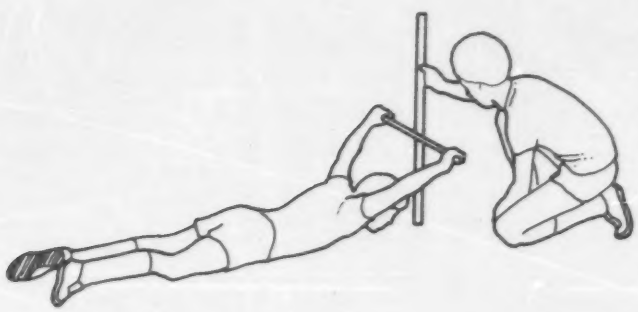
- The arm and shoulder reach tests the flexibility of the muscle in the front of your shoulder joint.

  a. Lie on your stomach on the floor.

  b. Hold a yardstick with your palms down and your arms and wrists straight.

  c. Raise your arms and the stick as high as possible, keeping your chin on the floor, and holding the stick with tight fists.

  d. Have your partner use a second yardstick to measure the distance from the floor to the bottom of the stick you are holding.

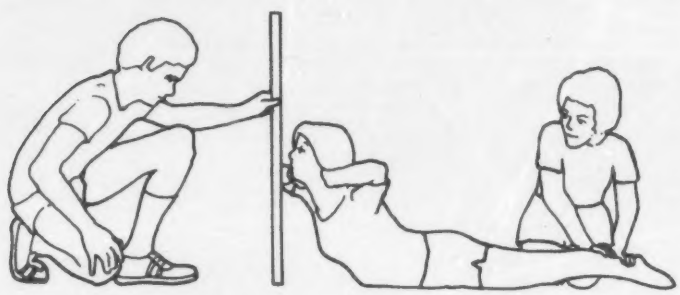


- The prone trunk lift measures the flexibility of the upper back and trunk.

  a. Lie on your stomach with legs together.

  b. As someone (not your partner—a third person) holds your feet down, clasp your hands behind your neck and lift your chin and chest as high as possible. Hold for three seconds.

  c. Have your partner use a yardstick to measure the distance from the floor to your chin.



B-3 Explain to students that:

- They should proceed from one station to another in groups.
- They will have to take turns using equipment if there is not enough.
- They should write their partner's name and pretest results on a slip of paper to be submitted to you after everyone has finished.

B-4 Record the results for each student on the Pretest Record Sheet.

Activity C:
Feelings about working with partners
(5 minutes)

Ask students their feelings about working with a partner of the opposite sex. Explain to students that working with partners will help girls and boys understand their similarities instead of exaggerate their differences. Such pairing will encourage them to work together in the future and help avoid stereotypic attitudes.

Note: At the end of this class period, you will need to assign Activity A of Lesson 9 to the students.

Lesson 9: Other People's Opinions about Physical Activity

Purpose

To give students an opportunity to find out what other people think about physical activity

Student Objectives

- To interview adults to learn about female and male attitudes toward physical activity when they were growing up and today
- To interview females and males currently involved in a program of physical activity

Generalizations

- People are socialized by families, schools, churches, and other cultural phenomena. All of these influence our attitudes about what is "appropriate" female and male behavior.
- People who know other people involved in physical activity are more likely to participate in physical activity than are people who have no role models.
- Girls, especially, need to be provided with role models, since girls are less likely than boys to have access to such models.

Special Preparations

Special arrangements must be made for classroom visitors in Activity B. If possible, arrange for visits by a female and a male athlete and a female and a male community member who participate regularly in an individual or group physical activity. You may choose to invite school personnel as the visitors for this activity. (You may wish to substitute a film for the visit by the adults. A list of suggested films is on page xv.)

Equipment: none

Activity A:
Getting information from your family
(15 minutes)

The day before this lesson, have students write down the following interview questions (or provide each student with a copy of the questions.) Tell students to use these questions to interview at least one adult—but preferably two. The adult can be someone in their household or in the neighborhood, or someone they can call on the phone. Students should write down the results and be prepared to discuss them. (If you think that students will not do this activity, you may prefer to have them interview an adult at school.)

Interview Questions

Name of Student _____

Name of Person Interviewed _____ Age _____

A-1 What sports or other physical activities did you regularly participate in when you were an adolescent?

_____

A-2 What sports were appropriate for females when you were in high school? _____

_____

A-3 What sports were appropriate for males when you were in high school? _____

_____

A-4 What sports do you think are appropriate for girls today?

_____

A-5 What sports do you think are appropriate for boys today?

_____

A-6 Do you think most girls should be encouraged to be as active in sports as most boys? Why or why not?

_____

_____

A-7 Do you think people's attitudes have changed about what physical activities are appropriate for females and males? If so, how and why? _____

_____

_____

_____

At the beginning of this class period, discuss adults' responses to questions A-1 through A-7. Stress that many changes in people's attitudes have taken place in the past decade. In general, people's concepts of female and male roles have expanded. Although traditional roles may predominate in some communities, both females and males have more options in their family, in their work, and in the physical activities in which they participate.

Title IX has mandated that no person can, on the basis of sex, be excluded from participation in any educational program or activity receiving Federal financial assistance. Because of Title IX, people have legal recourse in asserting their rights to participate equally in school activities of all kinds, including physical education activities.

Activity B:
Talking to people who participate in physical activity
(35 minutes)

Give the remaining time in the period to the visitors. These adults should be involved in a regular program of physical activity. For example, they may be amateur joggers or professional athletes. There should be an even mix of females and males. They may be school personnel, students' parents or other community members. (You may wish to substitute a film for the visit by the adults. A list of suggested films is on page xv.)

First, allow visitors about five (or more) minutes to introduce themselves and to explain what physical activities they have pursued and why. Then allow questions from students. Students may ask the same questions they asked adults in Activity A, or they may ask other questions. At least ten minutes should be given to discussion of A-7.

At the end of the class, summarize how people's activities and attitudes have changed from the past to the present:

- There is now more concern and information about physical activity as it relates to health.
- There is less desire or need to walk or bicycle because of technological advances in means of transportation.
- Changes in female and male roles are now being encouraged. Many females see the benefits of active participation in physical activity.

Lesson 10: Pretest for Agility and Static Balance

Purpose

To measure students' agility and static balance

Student Objectives

- To define the meaning and state the importance of agility and static balance
- To participate in two pretests for measuring agility and static balance: the Illinois Agility Run and the stick test of balance

Generalizations

- Agility is the ability to change body position or direction quickly while moving at full speed.
- Static balance is the ability to keep an upright position while standing still.
- Agility and static balance can be improved through doing activities that require these skills.

Special Preparations

Before class, you will need to set up the course for the Illinois Agility Run; you will also need to set up a station with five 2 x 2-inch sticks, one foot long, for the stick test of balance.

Equipment: stopwatch (or watch with a second hand), five 2 x 2-inch sticks, one foot long

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Agility

Balance

Activity A:
What are agility and static balance, and why are they important?
(5 minutes)

A-1 Use the following background information to explain briefly to students the meaning and importance of agility and static balance.

A-2 Stress that students should be concerned with developing their individual potential, not with how they compare with one another.

A-3 Display illustrations of activities related to agility and static balance or distribute visuals which will help students remember an activity related to each area.

Background Information: Agility and Static Balance

Agility is the ability to change body position or direction quickly, while moving at full speed. Agility can be improved through practice. It is necessary to activities such as wrestling, gymnastics, soccer, basketball, dodgeball, football, ice hockey, field hockey, and karate.

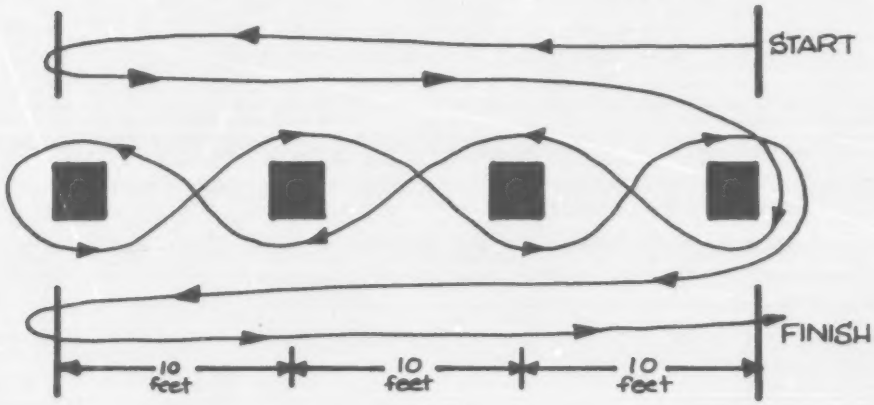
Static balance is the ability to keep an upright position while standing still. Static balance can be improved through practice. It is necessary for activities such as surfing, gymnastics, waterskiing, skating, and mountain climbing.

Activity B:
Measuring agility and static balance
(25 minutes)

B-1 Explain and demonstrate for students the following procedure for the pretests for agility and static balance:

- The Illinois Agility Run measures agility.

  a. This is the course you must run (show illustration).



  b. You must lie down in a push-up position with your head at the starting line. On go, run the course as fast as possible.

  c. Your results will be timed with a stopwatch (or a watch with a second hand).

Reprinted with permission from W. C. Adams, *Foundations of Physical Activity* Champaign, Ill.: Stipes Publishing Company, 1968 .

- The stick test of balance measures static balance.

  a. Place the balls of your feet across a 2 x 2-inch stick so that your heels are on the floor.

  b. Lift your heels off the floor and maintain your balance until fatigued, without moving your feet.

  c. Try the test twice.

B-2 Record each student's results for the Illinois Agility Run and the stick test of balance on the Pretest Record Sheet.

Part II: Building Fitness

Introduction

Part II, Building Fitness, gives students an opportunity (a) to set goals for improvement (Lesson 11) and (b) to try to improve in the six physical fitness areas covered in this unit (Lessons 12-23).

The activities in Part II are designed to be fun and to encourage boys and girls to participate together in physical activity, both now and in the future.

After completing these lessons, students will take posttests (Part III) to determine their actual improvement and to compare the results with the goals they set in Lesson 11.

Lesson 11: Setting Goals

Purpose

To help students set individual goals for improvement in six physical fitness areas

Student Objective

- To set specific—and realistic—goals for improvement in six areas of physical fitness

Generalizations

- Goals for improvement in physical fitness should be set according to individual interest and need.
- Many enjoyable activities can contribute to improvement in physical fitness.

Special Preparations

Student Handout: Setting Goals must be reproduced for students. Record students' names and pretest scores on the handouts before distributing them to students.

Equipment: none

Activity A: Discussing pretest scores (15 minutes)

A-1 Provide students with their copies of the Student Handout: Setting Goals (page 101). Make sure each individual's pretest scores are already recorded in the appropriate blanks.

A-2 Briefly review the definition of each of the six areas of fitness and how each area relates to performance in various activities (see Lessons 2, 4, 6, 8, and 10). Then discuss the results of the pretests.

- You may want to tell students the highest and lowest score and/or the median score in the class for each pretest.
- Explain to students that they should be concerned only with individual improvement, not with how they compare with other students, since each individual has unique potential.
- Remind students that individuals (both girls and boys) can improve their level of physical fitness by doing appropriate activities.
- Explain that at the end of this unit, and at the end of the year, students will take the pretests again to see how much improvement they have made.

A-3 Give students a brief explanation of the activities they will be doing in Part II to improve their level of physical fitness.

- Activities are designed to incorporate both music and games.
- Activities are designed to improve physical fitness in all six areas of fitness.
- Activities are done mainly with partners in order to encourage interaction, cooperation, and support (mutual trust) between female and male students.

Activity B: Setting posttest goals (20–30 minutes)

B-1 Ask students to decide how much improvement they want to make in each area and to write down desired posttest scores in the appropriate blanks on the handout. (Goals should be stated in the same terms—inches, miles, and so on—as the pretest scores are.)

B-2 Circulate among students to guide them in setting realistic but challenging goals.

B-3 Guide students in filling in their area of emphasis and in deciding which after-school activities to do to improve in this area. (See Lessons 2, 4, 6, 8, and 10 for information about what activities to use in improving fitness areas.)

B-4 Collect the handouts and save them until the posttests are completed. Give students an opportunity periodically to review their goals and remind themselves of activities they want to accomplish.

Student Handout: Setting Goals

Name _____ Date _____

Period/Class _____

Fitness Area	Pretest score	Goal	Posttest score
Cardiovascular endurance			
Muscular endurance			
Muscular strength			
Flexibility			
Agility			
Static balance			

Area I would like to improve the most: _____

After-school activities I will do to improve in this area:

Activities I actually did to improve in this area:

Lessons 12–23: Fitness Fun

Purpose

To provide students with opportunities to improve their levels of physical fitness in six fitness areas

Student Objective

- To participate in a variety of activities for improving fitness and improving one's attitudes toward physical activity

The following activities, to be done with partners, are designed to be fun. Students should work at least part of the time with partners of the opposite sex. Partners may be randomly assigned, changed from activity to activity, and/or individually chosen by students.

Starting with Activity 1, work through the 23 activities at whatever pace seems appropriate. For example, on the first activity day (Lesson 12), your class may do Activities 1-2, 1-3, or more. The amount of time spent on an activity should depend on how much your class enjoys that activity and how many areas of fitness are covered in that activity.

If your class works through all of the activities before Day 23 of the unit, which is designed for eleven days or lessons, begin again with Activity 1, choosing enough activities to fill the remaining amount of time.

Some of the activities are performed to music. Others require equipment such as balls, batons, or sticks; a balance beam or a large object on which students can stand; jump ropes; tape or chalk for marking lines on the floor; and a whistle. You will need to make sure the necessary equipment is available before beginning each day's activities. Most of the activities may be performed indoors or outdoors, though some (such as the heel and seat scoot, Activity 6, and the stand and step-slide, Activity 21) must be done on a smooth floor.

Important: Be sure to include warm-up activities at the beginning of each session, especially for activities that stress flexibility. At the completion of each activity, ask students: What areas of physical fitness does this activity improve? (This information is included in each of the following activity descriptions.)

Note: The Iowa Brace Test for Motor Educability* has various stunts that test balance, flexibility, and so on. These can also be used for activity days.

*The Iowa Revision of the Brace Test which is currently in use is described in Part III of *Tests and Measurements in Health and Physical Education*, 3rd ed., C. McCloy and Norman D. Young, New York: Appleton-Century-Crofts, Inc., 1954.

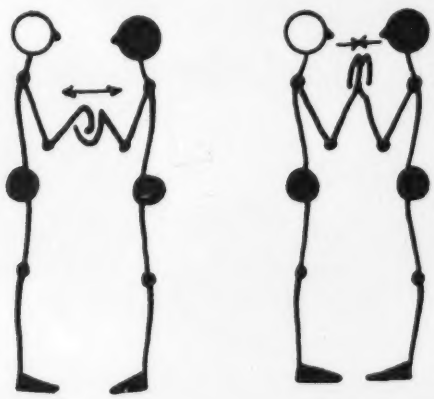
Activity 1: Disco jog (cardiovascular endurance)

Partners stand side by side and jog in place to music, challenging each other to keep going, through the duration of the music, or until the stop signal. This activity may be performed daily as a warm-up exercise.

Activity 2: Isometric arm push and pull (muscular strength)

Partners stand facing each other (grasping hands, as shown in the illustration) and use arm strength to push and pull at the same time so that, ideally, their hands stay in the middle. They do the activity until the music stops or a whistle is blown.

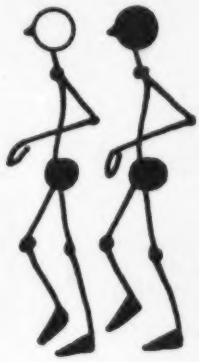
Note: Careful instruction and demonstration are necessary here for the students to understand what to do.



Activity 3: Partner parrot (agility)

Partners move by following the leader, as you signal them to do various activities by using the signals shown below:

Signal	Action
Use hitchhike signal	Run forward
Point at student	Run backward
Circle finger above head	Turn around
Put hands up with fingers spread	Stop
Extend hand laterally either right or left	Run sideways



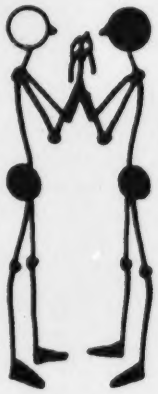
Partner B stands directly behind Partner A, watches Partner A's response, and repeats it.

Activity 4: Wheelbarrow walk (muscular strength and endurance)

Partner A holds Partner B's legs as Partner B uses the hands to walk along the ground. Students change places upon a signal from you as they travel from point 1 to 2 to 3, and so on.

Suggested time: 5 minutes

Activity 5: Soft war (balance and muscular endurance)



Partners stand face to face with palms touching, elbows bent, and feet apart. On the start signal, partners try to off-balance each other by applying pressure against each other's palms. Hands must be held flat against partner's palms; pulling or interlocking fingers is not allowed.

Activity 6: Heel and seat scoot (flexibility)

Partners sit side by side. Each extends the legs in front and grasps the toes. On signal, partners scoot their seat toward their heels; walk their heels out, holding onto their toes, until their legs are straight again; then scoot their seat toward their heels again—and so on, until both partners complete the distance required. Or, Partner A scoots the seat to the heels and then Partner B scoots the seat to the heels, and so on. Students will need a smooth surface for this activity.

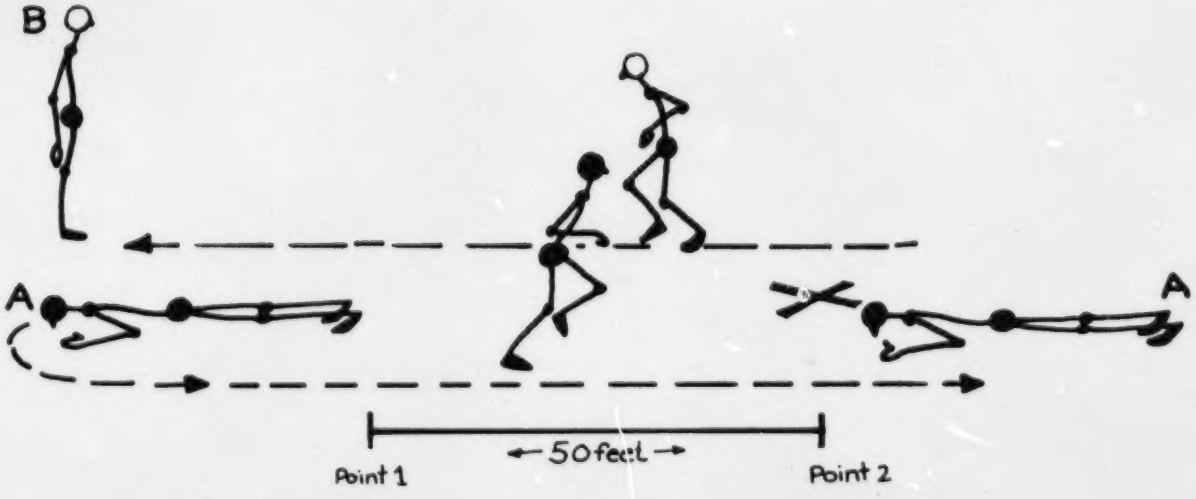
Activity 7: Inchworm (flexibility)

Partners start side by side, in a push-up position with their arms straight. Keeping their knees straight, they walk their feet toward their hands as far as possible, and then they walk their hands away from their legs until they are again in the push-up position. They should do the activity until they complete the distance required.

Activity 8: Take it down! No, put it back! (agility and cardiovascular endurance)

Partner A lies on the stomach at point 1, holding an object (a ball or baton, for example). On the start signal, Partner A gets up, turns around, runs to point 2, puts the object down, then lies down and waits. Partner B, who has been lying on the stomach at point 1, runs to point 2, retrieves the object, returns to point 1, and waits, lying on the stomach. Partner A runs to point 1, retrieves the object, and runs to point 2, and so on. This activity continues for three to five minutes. Partners should keep count of the number of times each one returns the object in the time allotted. Partners should add their scores together to compute a total score. You may want to have students repeat this activity, challenging each set of partners to increase their score on the second round.

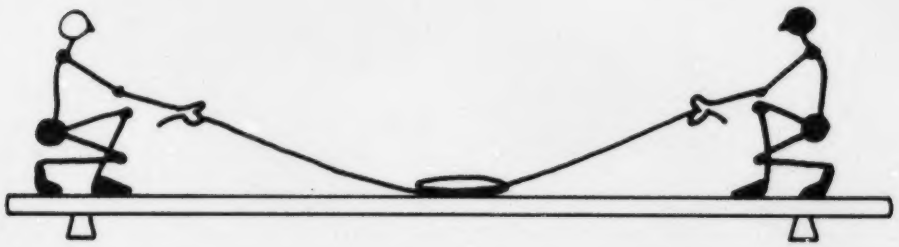
Suggested time: 3 to 5 minutes



Activity 9: Tug and tumble (balance and muscular endurance)

Partners crouch on opposite ends of a low balance beam. They each hold opposite ends of a jump rope coiled in the center of the beam. On the start signal, they reel in the rope until it is taut and attempt to pull each other off balance. (If a balance beam is not available, you may use tree stumps, tires, or heavy boxes. This activity may also be done on the ground, with the feet planted firmly.) Repeat the activity several times. If a stopwatch is available, time the contest until one partner loses balance.

Note: For Activities 9, 10, and 11, you may want to set up stations and rotate students to alleviate equipment problems.

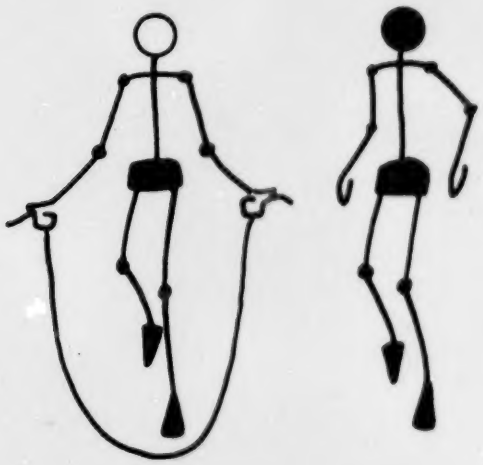


Activity 10: Toss and trot (cardiovascular endurance)

Partners stand face to face ten feet apart. One holds a ball. When the music starts, they toss the ball back and forth (chest pass) while trotting (jogging) in place. Tosses occur as quickly as the ball is received. Partners trot (jog) to the beat of the music, counting the number of successful passes. When the ball is dropped, the count begins again, with partners trying to increase the number of successful catches. This activity can be altered by increasing the distance between partners and/or changing the type of pass to a bounce pass, dribble and pass, and so on. The activity continues throughout the duration of the music or until the stop signal, and it may be repeated with variations.

Activity 11: Jump and jog (cardiovascular endurance)

As the music starts, Partner A begins jumping rope and Partner B jogs alongside. The jumper may use any type of jump. Partners switch roles at the start of a new record.



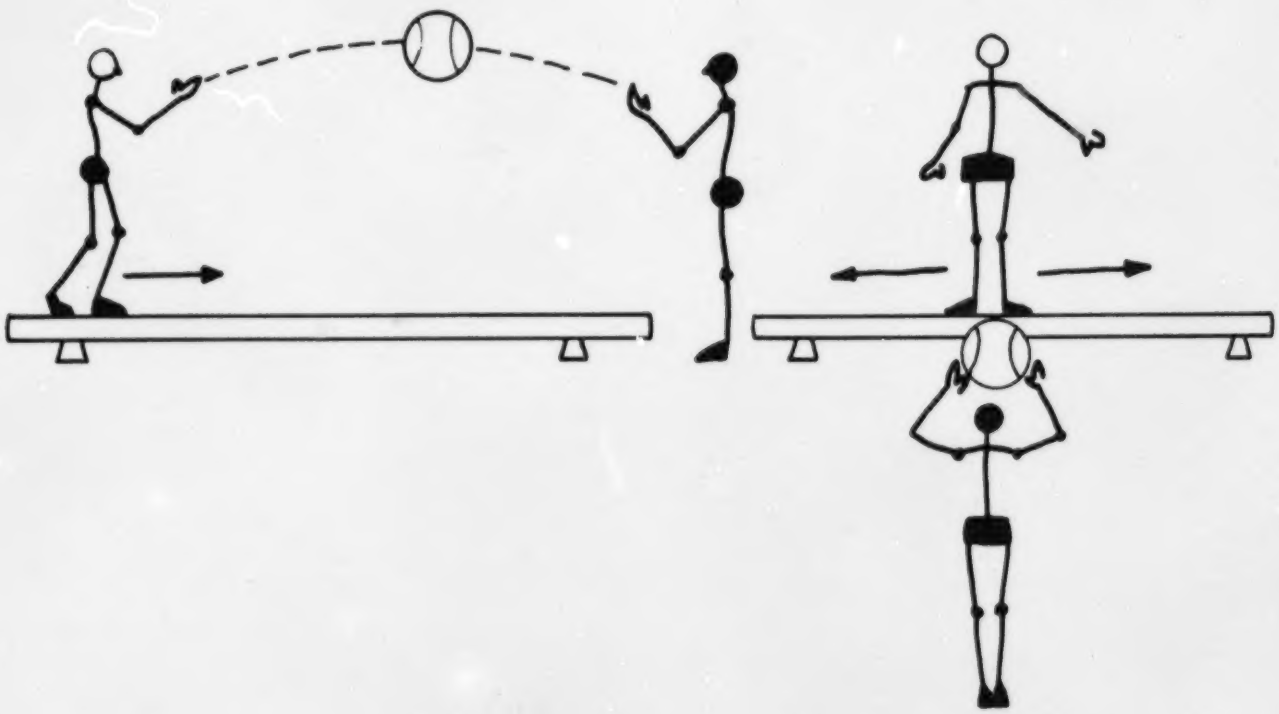
Activity 12: Beam balance and ball bounce (balance)

Partner A walks forward, backward, and sideward along a low, medium, or high beam while manipulating a ball with Partner B, who is not on the beam. Partners may:

- throw the ball back and forth
- bounce-pass the ball back and forth
- dribble the ball (on the floor) while moving on the beam

Partners change roles when the person on the beam falls. If a beam is not available, a curb, log, or coarse rope can be used.

Suggested time: 5 minutes



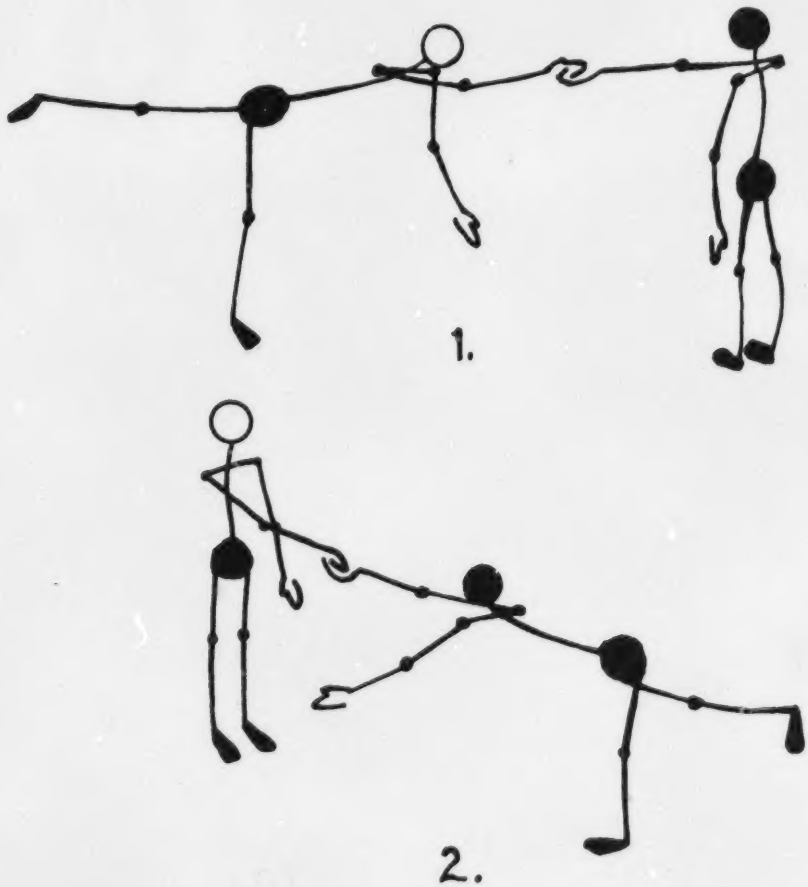
Activity 13: Partner pull-ups (muscular endurance and balance)

Partners stand face to face, with toes touching and forearms grasped. They proceed by repeatedly sitting down and standing up, without losing their balance or moving their feet. The activity may continue for up to one minute. Partners should count the number of stand-ups and sit-downs within the time allotted. After a rest, partners should repeat the activity.

Activity 14: One-legged bend and stand (muscular strength and balance)

Partners hold hands, as shown in the illustration. Partner A stands on one foot, attempting to bend at the waist, extending one leg behind and parallel to the ground, and then back to a standing position. Partner B then stands on one foot and attempts to bend at the waist and extend the leg without falling. They alternately repeat the task until the stop signal.

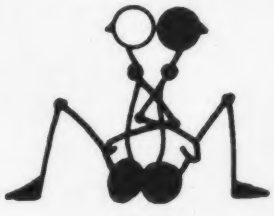
Suggested time: 2 minutes



Activity 15: Partners get up and down, up and down (muscular strength and endurance)

Partners sit on the floor, back to back, with elbows hooked and feet drawn up close to the body. Both start pushing together against the lower back of the other and rise to a standing position, without moving their feet. Then they sit down again, without moving their feet—and repeat the procedure for a period of two minutes.

1.



2.

Activity 16: Squat thrusts (muscular endurance)

Partners stand side by side. On the start signal (or when the music begins), Partner A squats down, places the hands on the floor, and extends both legs backward until the body is in a push-up position, with the arms straight. Partner A's legs quickly recoil to a squat position, and Partner A stands upright. Partner B then does the squat thrust, then Partner A again, then Partner B, and so on.

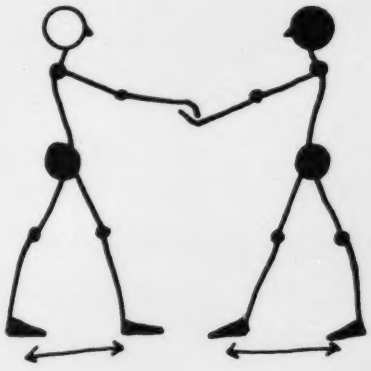
Suggested time: 3 minutes (or the duration of the music)

Activity 17: Bent knee sit-ups (muscular endurance)

Partners lie on their backs, side by side, clasping their hands behind the neck and bending their knees at a 90-degree angle. Either together or alternately, partners roll up slowly, touch elbows to knees, and return to the original position, keeping their fingers locked. Partners should challenge each other to keep going, until the stop signal.

Activity 18: Alternate leg changes (muscular endurance)

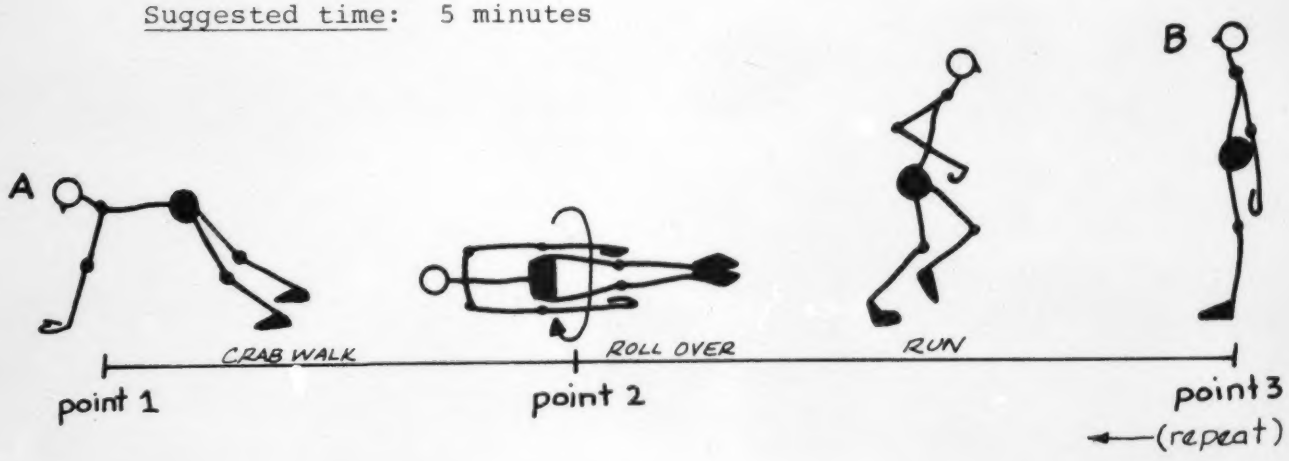
Partners hold hands, standing face to face. They jump, first with the right foot forward and then with the left foot forward. When Partner A's right foot is back, Partner B's left foot is forward, and vice versa. This exercise may be set to music and used as an alternate to the disco job (Activity 1).



Activity 19: Crab-roll run (agility)

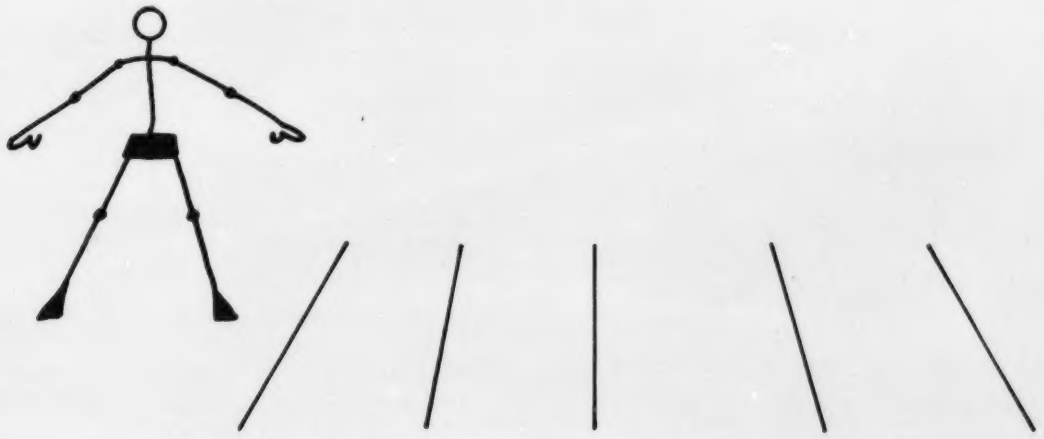
Partner A stands at point 1. On the start signal, Partner A assumes a crab-walk position (on all fours, with the stomach off the floor) and moves to point 2, rolls across the back, gets up, and runs to point 3, tagging Partner B. Partner B then crab-walks to point 2, rolls across the back and runs to point 1, turns around, and repeats the crab-roll-run to point 3, tagging Partner A. Partners count the total number of trips, cumulatively; each crab-roll-run equals one trip. Repeat after a rest.

Suggested time: 5 minutes



Activity 20: Stand and step-slide (agility)

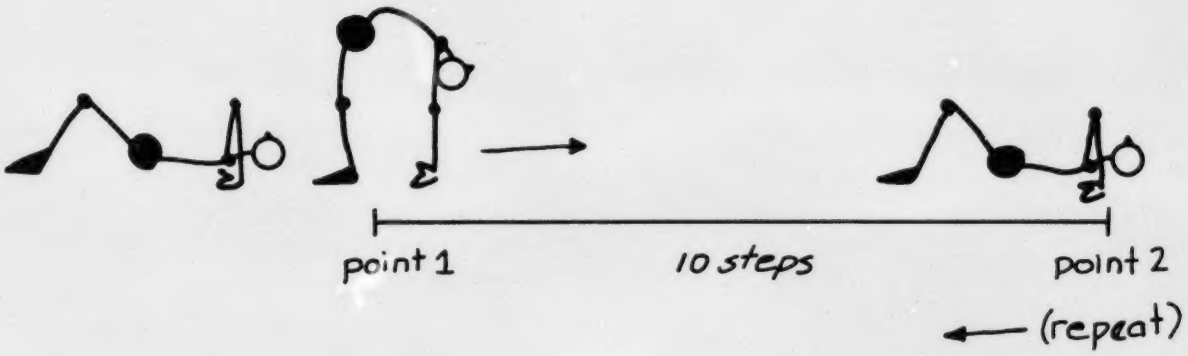
For this activity, place five parallel tape lines on the floor, each three feet apart. Partner A stands with both feet to the left of the far-left line. On the start signal, Partner A slides to the right, without crossing the feet, until the right foot steps outside the far-right line; then slides to the left, until the left foot steps outside the far-left line. Only one foot may cross the outside lines. Partner A repeats the right and left slides as many times as possible in ten seconds, while Partner B counts the number of rounds completed. On the stop signal, Partner A freezes in place and asks for the score. Score one point for each line crossed in ten seconds. Partner B then performs the activity while Partner A keeps score.



Activity 21: Arch up and march forward and back (flexibility and muscular strength)

Partner A lies on the back at point 1. On the start signal, Partner A pushes up into a back-bend position and walks (marches) on the hands and feet ten steps to point 2, rests on the back momentarily, pushes up to a back-arch position, and walks ten steps back to point 1. Partner A's eyes should be focused on the hands during this activity. Partner B counts the number of trips from point 1 to point 2 to point 1. Partner B then performs the activity while Partner A counts.

Suggested time: 1 minute for each march



Activity 22: Partner scramble game

The object of this game is for each student to secure a partner before the whistle is blown. On the signal scramble, students rush to find a partner of the opposite sex (or otherwise, however you indicate). When the whistle is blown, everyone must freeze. Designate a partner task for the students to perform until the stop signal; those students who have not found partners should secure a partner as the task begins. Each set of partners should then count repetitions until the stop signal. While the students rest, explain the next task to be performed. Then call scramble again. Students must find a different partner each time, never working twice with the same person.

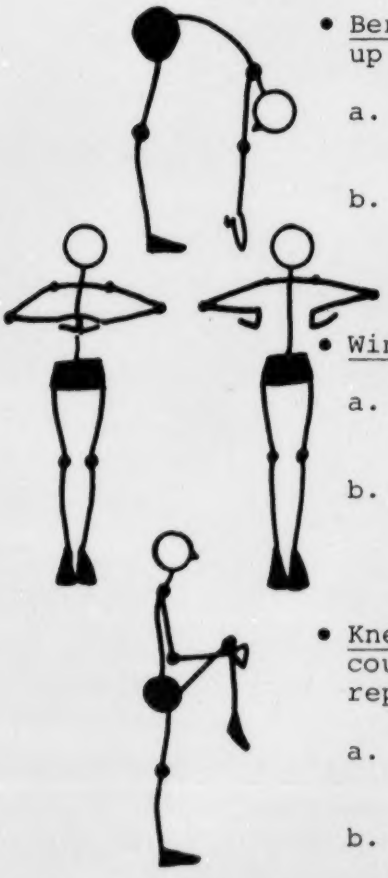
Activities L through U, as well as many other tasks, can easily be used in this game. Examples of other tasks that may be used are the inchworm, jumping in the air as high as possible, push-ups, sit-ups, and knee lifts. Students should attempt to keep exercising each time until the stop signal. Challenge students during each task to continue moving until the stop signal. Students can, if they wish, exercise to music, preferably something of their choice. The partner scramble can be used to give students an opportunity to work with many different partners.

Suggested time: 3 to 5 minutes for each task

Activity 23: Ready and disco-cise!

These exercises can be used with music as an introductory lesson to warm up the entire body. After the students have learned the sequence, it can be used at the beginning or end of class. (Other activities can be substituted or added to the sequence.

Students perform the following exercises to the beat of music (disco, for example) to warm up each area of the body or to end the class. Students work independently. Sequence the following exercises to the beat of 4/4 music so that students do each exercise for 24 beats before moving to the next exercise.



- Bend and stretch (three counts down and one count up to stand; repeat six times)

  a. Stand with feet shoulder-width apart and hands at sides.

  b. Slowly bend trunk forward and down, stretching gently while trying to touch fingers to toes or floor.

- Wing stretcher (24 counts)

  a. Raise elbows to shoulder height and clench fists together in front of chest.

  b. Thrust the elbows back as hard as possible without arching back, keeping head up and elbows at shoulder height.

- Knee lift (lift right = count one, pull three counts; lift left = count one, pull three counts; repeat three times)

  a. Stand with feet shoulder-width apart and hands at sides.

  b. Raise right knee as high as possible and grasp knee with hands.

c. Pull knee against body while keeping back straight and standing on other foot.

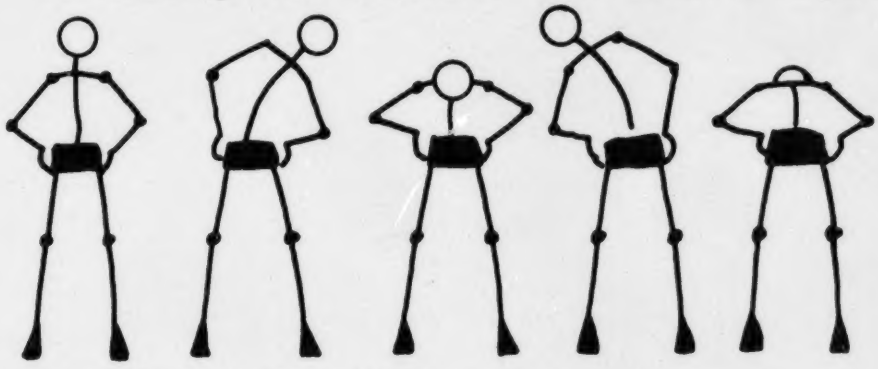
d. Repeat with left knee.

- Twister (front, left side, back, right side = four counts; repeat six times)

a. Stand straight with hands on hips and feet shoulder-width apart.

b. Bending forward from waist, twist trunk to left.

c. Bending trunk backward, twist trunk to right.



- Arm circles (24 counts)

a. Stand with arms held sideways at shoulder height, palms up, and feet shoulder-width apart.

b. Make 12 clockwise small circles with arms, keeping head up.

c. Do 12 counterclockwise circles.

- Prone arch (up two, rest two; repeat six times)

  a. Lie face down with hands tucked under thighs.

  b. Raise head, shoulders, and legs from floor. Rest and repeat.

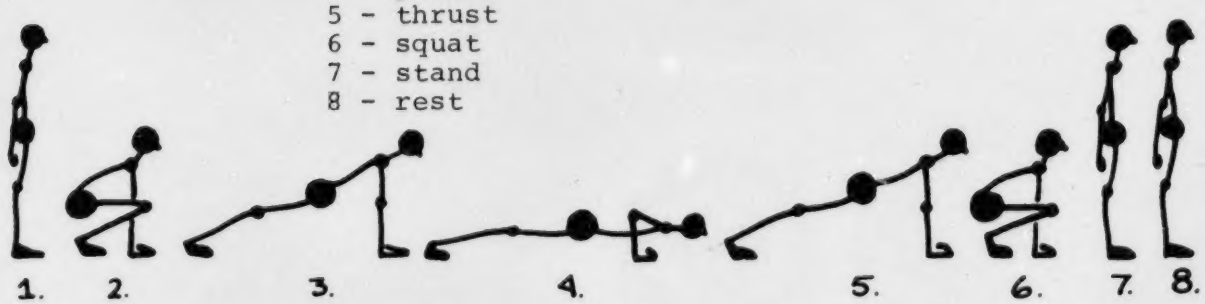
- Long stride step (two right, two left; repeat six times)

  a. Put hands on hips and take a long step.

  b. Bend front knee and lean slightly forward, keeping back leg on floor and nearly straight. Repeat with opposite leg forward.

- Eight-count push-ups (repeat four times)

  1 - stand
  2 - squat
  3 - thrust
  4 - press
  5 - thrust
  6 - squat
  7 - stand
  8 - rest



- Jog in place (24 counts)

Part III: Measuring Change

Introduction

In Part III, Measuring Change, students repeat the activities they did as pretests during Lessons 2, 4, 6, 8, and 10, in order to determine posttest scores. Students then use their pretest and posttest scores to find out how much improvement they have made (the posttests should be given at the end of the year, so that students have the time to make noticeable improvements). Finally, students set goals showing the kind of physical activity they want to pursue in the future.

Lessons 24–28: Posttesting

Purpose

To posttest students in six areas of physical fitness

Student Objective

- To take posttests in each of the six fitness areas

Before posttesting students in the six areas of fitness, follow these steps:

- Identify the test(s) to be taken.
- Ask students which area of fitness each test measures.
- Ask students to define briefly that area of fitness.

Then have the students repeat Activity B in Lessons 2, 4, 6, 8, and 10. Record all posttest scores on the Posttest Record Sheet that follows.

Student name	Posttest Record Sheet											
	Cardiovascular endurance	Muscular endurance			Muscular strength		Flexibility			Agility	Static balance	
	Cooper's 12-minute test	Side stand	Leg raise	Prone trunk lift (timed)	Vertical jump	Flexed-arm hang	Sit and reach	Arm and shoulder reach	Prone trunk lift (measured)	Illinois Agility Run	Stick stand	
	Laps/miles	Sec.	Sec.	Sec.	Height	Number	Inches	Inches	Inches	Time/rank	Trial 1 Sec.	Trial 2 Sec.

Posttest Record Sheet

Student name	Cardiovascular endurance	Muscular endurance			Muscular strength		Flexibility			Agility	Static balance	
	Cooper's 12-minute test	Side stand	Leg raise	Prone trunk lift (timed)	Vertical jump	Flexed-arm hang	Sit and reach	Arm and shoulder reach	Prone trunk lift (measured)	Illinois Agility Run	Stick stand	
	Laps/miles	Sec.	Sec.	Sec.	Height	Number	Inches	Inches	Inches	Time/rank	Trial 1 Sec.	Trial 2 Sec.

Lesson 29: Making Decisions about Physical Activity

Purpose

To help students make decisions based on changes in their attitudes toward physical fitness

Student Objective

- To use the information in the Student Handout: Setting Goals (from Lesson 11) to make decisions about students' physical activity in the future

Generalizations

- Goals for improvement in physical fitness should be set according to individual interest and need.
- Many enjoyable activities can contribute to improvement in physical fitness.

Special Preparations

Before returning the handouts to students (see page 99), record individual posttest scores in the appropriate blanks.

Equipment: none

Activity A: Discussing posttest scores (15 minutes)

A-1 Provide students with their copy of the Student Handout: Setting Goals (see page 101). Make sure each individual's scores are already recorded in the appropriate blanks.

A-2 Briefly review the definition of each of the six areas of fitness (see Lessons 2, 4, 6, 8, and 10). Then discuss the results of the posttests.

- You may want to tell students the highest gains in the class, the median score, and/or the highest and lowest girls' and boys' scores for each posttest.
- Explain to students that posttests will be given again at the end of the year so that they will have the time to make significant improvements.
- Remind students that both girls and boys can improve their level of physical fitness by doing appropriate activities.

Activity B: Making decisions (20–30 minutes)

B-1 Ask students to compare their own pretest and posttest scores to see how well they met their goals as stated on the handout.

B-2 Ask students to place an X by the after-school activities they actually did.

B-3 Ask students to answer the following questions in writing (they may use the back of the handout):

a. What activities in this unit did you enjoy the most?

b. Think about yourself as a girl or boy. Has this unit changed your attitude about what sports are okay for you?

c. Think about yourself as an individual (not as a girl or boy). Has this unit changed your attitude about yourself in any way? Explain.

d. What improvements do you want to make in your physical fitness?

e. Next year and the year after, in what sports do you want to participate? Why?

B-4 Collect the handouts for use in evaluating students.

Name _____

DECISIONS ABOUT PHYSICAL ACTIVITY
UNIT PERFORMANCE TEST

SECTION I: MULTIPLE CHOICE

Directions: For each question, write the letter of the answer that you think is correct.

_____ 1. Body types are divided into how many basic types?

a. Three
b. Four
c. Five

_____ 2. The most accurate statement below about girls and boys is:

a. All boys are stronger than all girls.
b. Boys benefit more than girls from physical activity.
c. In general, girls are more skilled than boys in flexibility and agility.

_____ 3. The best way to determine a person's physical ability is according to

a. whether a person is female or male.
b. the height of a person.
c. the body type of a person.

_____ 4. Cardiovascular endurance refers to

a. endurance of the heart, lungs, and circulatory system.
b. endurance of all muscles except the heart.
c. endurance of the joints in the body.

_____ 5. Of the body types below, which is best for running?

a. The ecto-mesomorph
b. The endomorph
c. The mesomorph

_____ 6. In general, regular physical activity

a. makes girls develop large muscles.
b. does not make girls develop large muscles.
c. makes girls less feminine.

_____ 7. Of the body types below, which is best for wrestling?

a. The mesomorph
b. The meso-endomorph
c. The ecto-mesomorph

SECTION II: TRUE/FALSE

Directions: For each item that follows, decide whether it is true or false. Write T for true and F for false.

_____ 1. Girls cannot be feminine if they are strong and active in sports.

_____ 2. Usually, it is healthier for females to relax than to sweat at sports.

_____ 3. Girls need as much physical activity as boys do.

_____ 4. People who participate in physical activities do not have energy left to do other activities.

_____ 5. Jogging mainly improves muscular strength.

_____ 6. Participating in sports can help a person learn social skills.

_____ 7. Gymnastics mainly improves a person's cardiovascular endurance.

_____ 8. People who develop a regular program of exercise are less likely to be overweight than those who don't.

_____ 9. Physically active people are less likely to suffer heart attacks when they are older.

_____10. You can tell how good a person is in sports by knowing whether the person is a girl or a boy.

SECTION III: ATTITUDE INVENTORY

Directions: For the items that follow, decide how much you agree or disagree with each statement. Mark your answers according to the code below. There are no right or wrong answers.

a. strongly agree
b. agree
c. no opinion
d. disagree
e. strongly disagree

_____ 1. Participating in sports helps me learn to cooperate with others.

_____ 2. The time I spend exercising could be better spent in other ways.

_____ 3. My body does not need active sports to help build strength.

_____ 4. I exercise only because I have to.

_____ 5. Exercising helps make me more likeable.

_____ 6. The exercise I get while playing sports is good for my overall health.

_____ 7. Doing physical activity with others is fun.

_____ 8. Being physically active adds to my joy and pleasure in living.

_____ 9. I get enough exercise while doing my everyday activities at home and in class.

_____ 10. I always participate in physical activity when I have the chance.

_____ 11. Girls should be less physically active than boys.

_____ 12. Everyone should have the opportunity to participate in all kinds of sports.

DECISIONS ABOUT PHYSICAL ACTIVITY
ANSWER KEY TO UNIT PERFORMANCE TEST

SECTION I

1. a
2. c
3. c
4. a
5. a
6. b
7. a

SECTION II

1. F
2. F
3. T
4. F
5. F
6. T
7. F
8. T
9. T
10. F

SECTION III

To obtain an attitude score, use the following scoring system:

For items 1, 5, 6, 7, 8, 10, and 12:

a = 4 points
b = 3 points
c = 2 points
d = 1 point
e = 0 points

For items 2, 3, 4, 9, and 11:

a = 0 points
b = 1 point
c = 2 points
d = 3 points
e = 4 points